



**Calhoun: The NPS Institutional Archive**  
**DSpace Repository**

---

Theses and Dissertations

1. Thesis and Dissertation Collection, all items

---

1994

# Preventing drug abuse in the Navy: an analysis of effectiveness and efficiency

Peterson, Dana Mark

Monterey, California. Naval Postgraduate School

---

<http://hdl.handle.net/10945/42852>

---

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

*Downloaded from NPS Archive: Calhoun*



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

**Dudley Knox Library / Naval Postgraduate School**  
**411 Dyer Road / 1 University Circle**  
**Monterey, California USA 93943**

<http://www.nps.edu/library>

# NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



## THESIS

**PREVENTING DRUG ABUSE  
IN THE NAVY: AN ANALYSIS  
OF EFFECTIVENESS AND EFFICIENCY**

by

Dana Mark Peterson

December 1994

Principal Advisor:

William Gates

Approved for public release; distribution is unlimited.

19950403 101

# REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE December 1994	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE Preventing Drug Abuse in the Navy: An Analysis of Effectiveness and Efficiency		5. FUNDING NUMBERS	
6. AUTHOR(S) Dana Mark Peterson		8. PERFORMING ORGANIZATION REPORT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey CA 93943-5000		10. SPONSORING/MONITORING AGENCY REPORT NUMBER  N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Bureau of Naval Personnel (BUPERS 63) Personnel Readiness & Community Support Department (Pers-63E) Arlington Navy Annex, G801 Washington, DC 20370-5630			
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE	
13. ABSTRACT Over the past decade, DoD surveys have shown a significant decrease in drug abuse within the Navy. This research considers the important elements of this reduction and conducts a qualitative and quantitative analysis of the Navy's drug abuse prevention programs. The primary question asks, "What is the most effective and efficient method to prevent drug abuse in the Navy?" The analysis reveals that drug testing and a strict "zero tolerance" policy have been key ingredients to the success of the Navy's drug abuse reductions. <u>Personal Responsibility Values Education and Training</u> (PREVENT) is the Navy's only formal (Level I) drug abuse prevention program. Using direct observational techniques, the author provides personal insights into the PREVENT program. PREVENT's cognitive/lifestyle prevention approach is the most effective model for preventing drug abuse. PREVENT is also effective at reducing other high-risk, addictive behaviors in junior enlisted personnel. Recommended efficiencies include consolidating the resource sponsor, major claimant, and program manager functions for drug abuse prevention training. Manpower effectiveness and efficiency recommendations are discussed, including establishing a career path for training specialists to coordinate and direct the Navy Alcohol and other Drug Abuse Program (NADAP) at the command level.			
14. SUBJECT TERMS Drugs, PREVENT, Drug Abuse, Navy, Military		15. NUMBER OF PAGES 138	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)  
Prescribed by ANSI Std. Z39-18 298-102



Approved for public release; distribution is unlimited.

**PREVENTING DRUG ABUSE  
IN THE NAVY: AN ANALYSIS  
OF EFFECTIVENESS AND EFFICIENCY**

by

Dana Mark Peterson  
Lieutenant Commander, United States Navy Reserve  
B.S., Virginia Tech, 1980

Submitted in partial fulfillment  
of the requirements for the degree of

**MASTER OF SCIENCE IN MANAGEMENT**

from the

**NAVAL POSTGRADUATE SCHOOL  
December 1994**

Author:

[REDACTED]  
Dana Mark Peterson

Approved by:

[REDACTED]  
William Gates, Principal Advisor

[REDACTED]  
Louis Kalmar, Associate Advisor

[REDACTED]  
David Whipple, Chairman  
Department of Systems Management

Accession For	
NTIS GRAM	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Small and/or	
Special	

A-1

## ABSTRACT

Over the past decade, DoD surveys have shown a significant decrease in drug abuse within the Navy. This research considers the important elements of this reduction and conducts a qualitative and quantitative analysis of the Navy's drug abuse prevention programs. The primary question asks, "What is the most effective and efficient method to prevent drug abuse in the Navy?" The analysis reveals that drug testing and a strict "zero tolerance" policy have been key ingredients to the success of the Navy's drug abuse reductions. Personal Responsibility Values Education and Training (PREVENT) is the Navy's only formal (Level I) drug abuse prevention program. Using direct observational techniques, the author provides personal insights into the PREVENT program. PREVENT's cognitive/lifestyle prevention approach is the most effective model for preventing drug abuse. PREVENT is also effective at reducing other high-risk, addictive behaviors in junior enlisted personnel. Recommended efficiencies include consolidating the resource sponsor, major claimant, and program manager functions for drug abuse prevention training. Manpower effectiveness and efficiency recommendations are discussed, including establishing a career path for training specialists to coordinate and direct the Navy Alcohol and other Drug Abuse Program (NADAP) at the command level.

## TABLE OF CONTENTS

I. INTRODUCTION .....	1
A. BACKGROUND .....	1
B. OBJECTIVES .....	2
C. THE RESEARCH QUESTION .....	2
D. SCOPE, LIMITATIONS, AND ASSUMPTIONS .....	3
1. Scope .....	3
2. Limitations .....	3
3. Assumptions .....	3
E. ORGANIZATION OF STUDY .....	4
F. DEFINITIONS .....	4
II. METHODOLOGY .....	7
A. QUALITATIVE ANALYSIS .....	7
1. Observational Evaluation .....	8
2. Interviewing .....	9
3. Document Analysis .....	10
B. 1992 WORLDWIDE SURVEY .....	12
1. Survey Methodology .....	12
C. THE 1991 NATIONAL HOUSEHOLD SURVEY ON DRUG ABUSE (NHSDA) ..	14
1. Survey Methodology .....	14
2. Limitations of the NHSDA .....	15
D. QUANTITATIVE ANALYSIS .....	15
1. The Drug Abuse Research Group (DARG) .....	16
2. Statistical Analysis .....	16
3. Cost Analysis .....	17
III. BACKGROUND OF DRUG ABUSE POLICIES AND PROGRAMS .....	19
A. HISTORICAL BACKGROUND OF NAVY DRUG CONTROL POLICIES .....	20
B. CURRENT NAVY DRUG CONTROL POLICY .....	22
C. NATIONAL AND DOD DRUG CONTROL POLICY .....	23

D. THE NAVY DRUG CONTROL PROGRAMS . . . . .	28
1. Drug Testing (Urinalysis Program) . . . . .	30
a. Drug Testing of New Accessions . . . . .	31
b. Quality Control (QC) In Drug Testing . . . . .	33
(1) The Open Proficiency Test. . . . .	33
(2) The Blind Proficiency Test. . . . .	34
c. Reliability . . . . .	34
2. The PREVENT Program . . . . .	34
a. Background . . . . .	35
b. PREVENT Funding . . . . .	37
c. PREVENT Methodology and Course Content . . . . .	39
3. Alcohol and Drug Abuse Managers/Supervisors (ADAMS) . . . . .	42
4. Drug and Alcohol Program Advisor (DAPA) Program . . . . .	43
IV. MEASURING THE EFFECTIVENESS OF DRUG ABUSE PREVENTION . . . . .	45
A. FACTORS INFLUENCING DRUG ABUSE . . . . .	45
B. DRUG TESTING: AN EFFECTIVE METHOD OF DETERRENCE? . . . . .	49
1. Drug Testing in the Civilian Sector . . . . .	49
2. Drug Testing in the Military . . . . .	53
a. Randomness of the Drug Test (Using Constant Model) . . . . .	54
b. A Clear Statement of Consequences . . . . .	55
c. Command Level Implementation . . . . .	56
d. Reliability/Believability of the Drug Test . . . . .	58
C. STUDIES ON THE MOST EFFECTIVE PREVENTION MODELS . . . . .	59
1. The Cognitive Style Approach . . . . .	61
D. THE PREVENT MODEL . . . . .	61
1. Direct Observational Analysis . . . . .	62
a. Positive Factors of PREVENT'S Effectiveness . . . . .	62
(1) Multiple High-Risk Addictive Behaviors. . . . .	62
(2) The Group Setting. . . . .	64
(3) The Course Length. . . . .	65
(4) Mobility of PREVENT. . . . .	65



b. Negative Factors of PREVENT's Effectiveness . . . . .	66
(1) Funding of PREVENT. . . . .	66
(2) Lack of Segregation (Officer/Enlisted). . . . .	67
(3) Facilitator Contractual Considerations. . . . .	67
(4) PREVENT and Personal Finances. . . . .	68
2. The Effectiveness of PREVENT . . . . .	69
E. DRUG ABUSE PREVENTION IN THE U.S. AIR FORCE (USAF) . . . . .	74
1. Effective Elements to Drug Prevention in the USAF . . . . .	78
a. Historically Tighter Drug Abuse Policy . . . . .	78
b. Quality of Recruit/Psychological Profile . . . . .	79
c. Proactive Law Enforcement . . . . .	82
(1) The Source Program. . . . .	83
(2) The Undercover Agent Program. . . . .	83
d. Quality of Life . . . . .	85
V. MEASURING THE EFFICIENCY OF DRUG ABUSE PREVENTION . . . . .	89
A. DRUG ABUSE PREVENTION PROGRAM FUNDING . . . . .	89
1. The Drug Testing Program . . . . .	90
a. DoD Drug Lab Consolidation . . . . .	91
2. The PREVENT Program . . . . .	92
a. Multiple Resource Providers . . . . .	93
b. Flexible Budget . . . . .	94
c. Drug Prevention Verses Other "Wellness" Programs . . . . .	95
(1) Zero-Based Training and Education Review	
(ZBT&ER). . . . .	95
3. Community Awareness Programs . . . . .	97
a. The Drug Education For Youth (DEFY) Program . . . . .	98
B. PERSONNEL EFFICIENCY AND EFFECTIVENESS IN DRUG PREVENTION . .	101
1. The Command DAPA . . . . .	101
a. Billet Assignments and The DAPA . . . . .	102
b. Volunteers for DAPA . . . . .	102
c. Abundance of Special Programs and Training	
Requirements . . . . .	103
2. Training and Special Program Professional . . . . .	104

VI. CONCLUSIONS AND RECOMMENDATIONS .....	107
A. CONCLUSIONS .....	107
1. Drug Testing as an Effective Method for Preventing Drug Abuse ..	107
2. The Best Model for Preventing Drug Abuse .....	108
3. The Efficient Utilization of Resources .....	108
a. The Flow of Program Funds and Management	
Responsibilities .....	108
b. Efficiency and Effectiveness at the Command Level .....	109
B. RECOMMENDATIONS .....	110
1. Maintain a Sound and Proactive Prevent Program .....	110
2. Consolidation of Wellness Type Program Responsibilities .....	110
3. Continue Current Drug Testing: Focus on Command	
Implementation .....	111
4. Strongly Defend the Navy's Drug Abuse Prevention Budget .....	111
C. AREAS FOR FURTHER RESEARCH .....	112
1. Target Drug Testing Based on Age .....	112
2. Expanding the PREVENT Program .....	112
3. Developing Effective Strategies for the DPAS/DIPM Program .....	112
LIST OF REFERENCES .....	113
INITIAL DISTRIBUTION LIST .....	122

## LIST OF FIGURES

3-1	DoD Historical Drug Trends . . . . .	19
3-2	Total Federal and DoD Drug Control Budget . . . . .	25
3-3	Total Federal and DoD Drug Budget (FY-93) . . . . .	26
3-4	Total Federal and DoD Drug Budget (FY-95) . . . . .	27
3-5	NADSAP/PREVENT Graduates . . . . .	36
3-6	NADSAP/PREVENT Resource Funding . . . . .	38
3-7	PREVENT Curriculum Topics . . . . .	39
4-1	Civilian Employee Test-Positive Rates . . . . .	50
4-2	Testing Alone versus Testing With Programs . . . . .	51
4-3	Corporate Attitudes on The Effectiveness of Drug Testing . . . . .	52
4-4	Civilian and Navy Comparisons of Substance Abuse . . . . .	63
4-5	PREVENT Graduates' Increased Awareness . . . . .	70
4-6	PREVENT Graduates' Planned Changes . . . . .	71
4-7	Comparing PREVENT and Non-PREVENT Attendees . . . . .	72
4-8	PREVENT Graduates' Impressions . . . . .	73
4-9	USN versus USAF Historical Rate of Drug Abuse . . . . .	75
4-10	Service Comparison of Drug Abuse (Adjusted) . . . . .	76
4-11	Service Comparison of E1-E3 Drug Abusers (Adjusted) . . . . .	77



## LIST OF TABLES

3-1	Department of Defense Drug Control Budget (\$ in Millions) . . . . .	27
3-2	USN Demand Reduction Budget (FY93-FY94) . . . . .	29
3-3	Navy Urinalysis Testing Program . . . . .	31
3-4	New Entrant Separations For Drug Abuse . . . . .	32
3-5	PREVENT Course Syllabus . . . . .	41
4-1	Risk Factors For Drug Abuse . . . . .	46
4-2	Any Drug Use (Past 12 Months) Percent by Sociodemographic Characteristics . . . . .	48
4-3	DoD Historical Drug Abuse Trends (Past 30 Days/Past 12 Months)	74
4-4	Recruit Quality Measures (in Percent) . . . . .	80
4-5	Reenlistment Rates (FY87-FY93) . . . . .	86
5-1	DoD Counterdrug Budget Summary (\$ Millions) . . . . .	90
5-2	Sponsors and Claimancy of Various Wellness Type Programs . . .	96



## ACKNOWLEDGMENT

The author would like to express his appreciation for the financial support of The Bureau of Naval Personnel (BUPERS), Drug and Alcohol Program Division (Pers-63E). The funds were used for travel associated with this thesis.

The author would also like to thank Dr. Bill Gates, the principal thesis advisor, for his helpful guidance and direction. Finally, special thanks is offered to my wife, Renee, and our four daughters: Charlotte, Courtney, Christina, and Katy. Each participated in their own way, and this thesis would not have been possible without their loving support.





## I. INTRODUCTION

### A. BACKGROUND

The Navy's internal "war on drugs" began in December 1981 when Admiral Hayward, the Chief of Naval Operations (CNO), explicitly acknowledged the Navy had a drug problem. Drug abuse was rampant within certain segments of the service. The Admiral based his conclusions on a Department of Defense (DoD) self-reporting survey showing 47 percent of the junior enlisted personnel had used marijuana during the previous 30 days. The Admiral outlined a tough new policy toward drug abuse in a service wide videotape presentation which was shown to every individual in the Navy. During the presentation, Admiral Hayward's fervent remarks epitomized the Navy's reversal of "indifference and passivity" toward drug abuse:

We're going after this drug abuse problem in a multi-faceted way...In other words, we're putting on a full-court press to generate as much deterrence, as much dis-incentive to our shipmates using drugs as we know how...{We will accept} one simple set of standards: ...not on my watch...not on my ship...not in my Navy. (Hayward, 1981)

Over a decade has passed and drug abuse within the Navy is at an all time low. The most recent worldwide survey of substance abuse among military personnel shows the Navy's overall abuse rate at about four percent, well below the civilian sector's ten percent rate (Bray et al., 1992). But the reduction has cost the Navy a tremendous amount in resources, both in monetary and personnel terms. In FY-93 alone the Navy spent more than 27 million dollars in drug demand reduction endeavors while testing over 1.8 million urine samples. The "zero tolerance" policy now includes all Navy personnel (E-1 and above), with mandatory separation for a single abuse incident. Additionally, every command in the Navy has an assigned Drug and Alcohol Program Advisor (DAPA) who is responsible to the commanding officer

for implementing the Navy's Alcohol and Drug Abuse Program.

With the reductions in illegal drug use over the past decade, the Department of Defense (DoD) and the Navy have significantly cut drug prevention dollars. When considering the time and resources expended in preventing drug abuse and the downturn in prevention funding, the question must be asked, "are we utilizing our resources properly to maximize our effectiveness and efficiency in fighting drug abuse?" The Navy has adopted the Deming concept of Total Quality Management (TQM), which stresses the importance of continual process improvement. A critical part of improving quality is to evaluate both effectiveness and efficiency. Through qualitative and quantitative analysis, this thesis will attempt to address these critical elements of quality as they relate to the Navy's drug abuse prevention programs.

## **B. OBJECTIVES**

The objective of this study is to consider what is the most effective and efficient method to prevent drug abuse in the Navy. Both qualitative and quantitative techniques will be used to analyze key aspects of the Navy's drug abuse prevention programs.

## **C. THE RESEARCH QUESTION**

The primary research question is: What is the most effective and efficient method to prevent drug abuse in the Navy? Subsidiary questions include:

- Is drug testing an effective method for preventing drug abuse?
- What is the best model for preventing drug abuse?
- Does the Navy efficiently utilize its resources in fighting drug abuse?

## **D. SCOPE, LIMITATIONS, AND ASSUMPTIONS**

### **1. Scope**

This thesis will focus on the demand reduction side of illegal drug abuse. Supply reduction (i.e., drug interdiction) is beyond the scope of this study. It is discussed only for historical background and briefly mentioned during some limited resource allocation analysis.

### **2. Limitations**

The primary limitation to this study is the lack of reliable Benefit-Cost Analysis (BCA) on drug prevention and abuse. Because drug use is illegal and it is difficult to quantify prevention benefits and indirect costs, the research failed to reveal any in-depth studies which accurately perform a true BCA of drug abuse in the Navy.

### **3. Assumptions**

This study assumes the Navy's current policy of "zero tolerance" will remain in effect and is not subject to change. Additionally, this thesis assumes the rationale behind the zero tolerance policy (as explained in the Navy's Alcohol and Drug Abuse Prevention and Control Instruction) is an accurate portrayal regarding the negative affects of drug abuse. The instruction states:

...drug abuse is a severe detriment to morale and esprit de corps. It undermines the very fiber of combat readiness, health, safety, discipline, reliability, judgment and loyalty...drug abuse is incompatible with the maintenance of high standards of performance, military discipline and readiness and is destructive of Navy efforts to instill pride, promote professionalism, and enhance personal excellence. (OPNAVINST 5350.4B)

## E. ORGANIZATION OF STUDY

This chapter has introduced the reader to the general topic of "Drug Abuse Prevention in the Navy." Chapter II will address the methodology used to collect and analyze the data. Chapter III will present a historical background of drug abuse policies and programs. Chapters IV and V analyze the effectiveness and efficiency of drug abuse prevention programs. Chapter VI will render conclusions and recommendations.

## F. DEFINITIONS

When required, definitions are provided in the text of this study. However, several important terms used throughout the thesis are highlighted below:

- **Blind Quality Control Sample:** Urine samples which may be fortified with drug or metabolite; their identity is unknown to the drug testing laboratory. Blind quality control samples are randomly intermixed with patient samples.
- **Cutoff:** The administratively defined urine concentration of drug or metabolite which determines the presence or absence of a specific drug.
- **Drug Abuse:** The use of an illegal drug (or a legal drug which is used for other than its intended purpose).<sup>1</sup>
- **False Negative:** Failure to report a drug or metabolite that is present above the cutoff.
- **False Positive:** Report of a drug or metabolite that is not present above the cutoff.

---

<sup>1</sup>Many professionals also include alcohol when discussing drug abuse. This thesis does not focus on alcohol abuse. For brevity, the term "drug abuse" will be considered as synonymous with "illegal drug abuse."

- **Gaming:** The strategy used by a drug abuser to avoid detection of drug use (e.g., using inside knowledge of when a random drug test is scheduled to be conducted or flushing the body system with inordinate amounts of liquid).
- **Tetrahydrocannabinol (THC):** The active ingredient in marijuana.



## II. METHODOLOGY

### A. QUALITATIVE ANALYSIS

In his book entitled, *Qualitative Evaluation and Research Methods*, Patton (1990) describes three methods for conducting qualitative analysis. These include:

- (1) Direct Observation
- (2) Interviewing
- (3) Document Analysis

Each method has its own limitations and weaknesses. For example, direct observation suffers from focusing on external behaviors and is limited by the amount of data available from relatively few observations. Interviewing is restricted to the perceptions and perspectives of the persons being interviewed; furthermore, interview data is subject to recall error and interviewer bias. Document analysis also contains several weaknesses which are discussed later. Using a combination of all three data gathering techniques increases the validity of the information and compensates for the weaknesses inherent in each individual method.

Patton (1990) also contends that qualitative analysis permits the researcher to look at a particular issue in greater depth and detail without being constrained by prearranged categories of analysis. In contrast, quantitative analysis requires using standardized measures so varying perspectives and experiences can be grouped in predetermined categories. In quantitative analysis, careful attention to the data measuring instrument is critical. Unfortunately, all too often the focus becomes the measuring tool itself.

An interesting characteristic of qualitative analysis is the way in which the researcher becomes one of the measuring "instruments." This may create additional risk of bias and variation, but Guba and Lincoln (1981) make the following argument in their book on effective evaluation.

...this loss in rigor is more than offset by the flexibility, insight, and ability to build on tacit knowledge that is the peculiar province of the human instrument. (Guba & Lincoln, 1981)

### **1. Observational Evaluation**

Observational evaluation contains both direct participant and non-participant qualities; this study utilizes both methods. Direct observational participation involved attending the Navy's only formal (Level I) drug abuse prevention program entitled, "Personal Responsibility and Values: Education and Training (PREVENT)." Indirect participation is derived from the interviews and document analysis sections of the research.

Direct observational analysis may be the best form of research to fully comprehend the complexities of some issues. Howard Becker (a social science researcher) is one of the leading practitioners of the qualitative research methodology. He suggests that "participant observation is the most comprehensive of all types of research strategies." He makes the following point:

The most complete form of the sociological datum, after all, is the form in which the participant observer gathers it: an observation of some social event, the events which precede and follow it, and explanations of its meaning by participants and spectators, before, during, and after its occurrence. **Such a datum gives us more information about the event under study than data gathered by any other sociological method.** (Becker & Geer, 1970).

Patton (1990) adds that participant observation permits the researcher to understand and appreciate a particular program with greater depth.



## **2. Interviewing**

In the qualitative research methodology, "fieldwork" refers to the evaluation technique used when the researcher is on-site (i.e., physically present). A number of interviews have been conducted both "in the field" and over the phone. These interviews provide valuable data on the Navy's drug abuse programs. They enhance the written documentation by giving personal emphasis to areas which might otherwise be neglected. Another positive aspect of interviewing is the benefit gained through the experience and specialized knowledge of others.

To maximize the efficiency and accuracy of the interview, this thesis uses several strategies suggested by Hunt (1993) and Patton (1990). The strategies include:

- Establish an interview time/place in advance.
- Develop open-ended questions and send them in advance of the interview to the interviewee.
- Tape record the interview.
- Review and interpret the information gained from the interview through transcribed notes.

On-site interviews were conducted in Washington D.C. and San Diego, CA at the following offices:

- (OSD) Department of Defense Drug Enforcement Policy & Support (USDP/DEP&S-DR)
- The Secretary of the Navy (SECNAV) Drug Demand Reduction Task Force (DDRTF)
- Bureau of Naval Personnel (BUPERS): Navy Drug & Alcohol Program (Pers 63). {Training and Detection & Deterrence Branches}

- DCNO (Plans, Policy, & Operations) Counterdrug Branch (N-515)
- U.S. Air Force (USAF) Drug Demand Reduction Office (AF/DPCH)
- PREVENT Office, 32nd Street Naval Station, San Diego, CA
- Navy Personal Research and Development Center (NPRDC),  
San Diego, CA

Many follow-on interviews were conducted by phone with personnel from other offices. When required, these interviews are referenced in the thesis text.

### **3. Document Analysis**

Document analysis serves to gather pertinent information and to validate the information gathered from the previously mentioned methods of qualitative research (observational and interviewing). The amount of data available on drug abuse prevention is staggering. A major source of information is the U.S. Government. The Anti-Drug Abuse act of 1988 requires the President to develop and annually submit to Congress a National Drug Control Strategy. The Office of National Drug Control Policy was created to assist the President in this endeavor. Additionally, the National Institute on Drug Abuse (NIDA) maintains a massive clearing house with recent studies, reports and publications specifically dealing with drug abuse and prevention.

There are several "on line" forums available through computer modem which contain drug prevention resources. An example is the Teachers Information Network (TIN). TIN provides a "Substance Abuse Forum" to allow academic professionals a medium to share information on drug abuse prevention.

Many governmental agencies receive drug demand reduction funds and each has programs dealing with drug abuse prevention. For example, the "Southwest Regional Center for Drug-Free Schools and Communities" maintains

the "Substance Abuse Forum" (previously mentioned) as part of a grant with the Department of Education. Additionally, studies and research dealing with drug abuse and prevention are available from many universities and other professional organizations (both profit and non-profit). Another informative source is the U.S. Congress. Select committee hearings on drug abuse are routinely conducted, providing a wealth of background and policy review.

Using many of these resources, this thesis used an informal archival research methodology to obtain a large quantity of condensed factual information. As noted in previous thesis research (Lewis, 1993) there are some problems associated with this type of informal secondary archival research. Quoting from *Research Methodology & Business Decisions* (Buckley, 1976), some of these pitfalls include:

- Selective depositing
- Selective survival
- Selective retrieval
- "Filling in the gaps"
- Biases inherent in the researcher
- Skill-deficiencies of the researcher

Even with these potential drawbacks, secondary archival research carries the advantage of allowing the researcher to acquire and analyze a significant amount of condensed information.

## **B. 1992 WORLDWIDE SURVEY**

The "Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel" provides the most informative research available into the actions, beliefs, and attitudes of military personnel. The 1992 survey is the fifth study conducted since 1980. Sponsored by DoD, the 1992 survey provides comprehensive estimates of drug and alcohol abuse along with other health-related, high risk factors (e.g., tobacco use, AIDS transmission, gambling, and nutrition).

### **1. Survey Methodology**

The 1992 Worldwide survey contains a sample size similar to the dimensions of previous surveys (e.g., approximately 25,000 service members from 63 geographic sites worldwide). As outlined in a recent phone interview between Bray and Hildebrandt (1994), the 1992 Survey uses a deeply stratified, two-stage, two phase cluster sample design with the estimates corresponding closely to the actual DoD population characteristics (concerning sex, race/ethnicity, education, age, marital status, and pay grade). The eligible survey population included all active-duty military personnel except: recruits; Service academy students; those who were absent without leave (AWOL); and persons in transit on a Permanent Change of Station (PCS) transfer. The overall response rate was 77.3 percent (which equated to 16,395 military personnel). Of particular note is the method in which the team members explained the purpose of the survey to the respondents. Personnel were encouraged to cooperate and provide honest answers while being given full assurances of anonymity.

The analytical approach employed in the Worldwide survey uses descriptive tabulations and multivariate regression analyses of the survey data. Standardization techniques are also used to statistically adjust for the

demographic characteristics of the personnel taking the survey. These characteristics are adjusted for personnel across the previous Worldwide Surveys, the military Services and the civilian populations. Adjusted rates allow for comparison between survey years and the different Services. Regression-based standardization techniques are used to adjust each Service's sociodemographic make-up. This procedure allows the construction of prevalence rates that would be expected if each military Service had the same sex, age, education, race/ethnicity, and marital status distribution. This thesis uses the adjusted figures throughout the analysis unless otherwise noted.

The following list contains the **nine objectives** summarized in the 1992 Survey:

- (1) Assess the prevalence of substance use (alcohol, illicit drugs, tobacco, and nonmedical use of psychotherapeutic drugs) during the previous 30 days and 12 months.
- (2) Assess negative effects of alcohol and other drug use.
- (3) Identify the demographic and behavioral characteristics of substance users.
- (4) Examine trends in substance use.
- (5) Assess health practices, behaviors, and attitudes.
- (6) Examine reasons for substance use and nonuse.
- (7) Determine the prevalence of problem gambling among Service members.
- (8) Estimate selected medical costs of heavy smoking and heavy drinking among active-duty personnel.
- (9) Compare military and civilian rates of substance use and knowledge about AIDS.

### **C. THE 1991 NATIONAL HOUSEHOLD SURVEY ON DRUG ABUSE (NHSDA)**

The 1991 National Household Survey on Drug Abuse (NHSDA) is the eleventh study in a series of nationwide surveys designed to measure the prevalence of drug use among American households. The first two studies were conducted in 1971 and 1972 under the direction of the National Commission on Marijuana and Drug Abuse. NIDA sponsored the NHSDA From 1974 to 1991. Beginning in October 1992, the NHSDA responsibility was moved to Office of Applied Studies (OAS) within the newly created Substance Abuse and Mental Health Services Administration (SAMHSA). Normally, three key reports are published after each annual survey:

- Preliminary Estimates via Advance Reports
- Population Estimates report providing demographic statistics
- Main Findings report which complements and expands the scope of the Population Estimates report

The statistical analysis conducted in this thesis uses the 1991 NHSDA results because this is the most recent survey completed which published all three of the reports listed above. The 1992 Main Findings report was never published after the 1992 survey and the most current report from the 1993 survey is the Preliminary Estimates publication (Population Estimates and Main Findings for the 1993 survey are expected out in late 1994 and 1995 respectively). Information from the 1992 and 1993 NHSDA's is used however to update the thesis analysis when appropriate.

#### **1. Survey Methodology**

The 1991 survey uses the same methodology which previous studies employed. It contains 32,594 observations in four age groups ranging from 12 to 35+. The sample design is a multi-stage, probability sample which meets

certain precision constraints for subgroups defined by age and minority membership. The sample excludes those persons who lived in group quarters or institutions (e.g., college dormitories, military bases, jails, and hospitals). Transient populations such as the homeless are also excluded.

Sampling weights are used in the 1991 survey to compensate for nonresponse and undercoverage. They also are used to reflect selection probabilities. A post-stratification adjustment forced respondent weight totals to mirror population totals for major characteristics (e.g., age, sex, and race/ethnicity).

## **2. Limitations of the NHSDA**

Several shortcomings of the NHSDA have been noted. Specifically, the survey omits frequent absentees who may have a particular propensity for drug abuse (e.g., homeless people and jail occupants). Additionally, the 18 percent nonresponse rate creates the possibility of nonresponse bias. However, the RAND Corporation supports the NHSDA survey. In a recent study in which RAND models the demand for cocaine (Everingham & Rydell, 1994) the NHSDA is supported as the best data available since no other measurements are sufficiently consistent over time.

## **D. QUANTITATIVE ANALYSIS**

Quantitative analysis uses standardized measures to correlate varying perspectives and experiences. These correlations are used to group responses into limited, predetermined categories so that quantitative (i.e., numerical) figures can be assigned. A significant advantage to quantitative analysis is that many responses can be manipulated to a specific number of questions, thereby facilitating comparisons and statistical relationships. Quantitative research requires careful instrument construction to ensure validity of the results.

Most of the quantitative analysis used in this thesis is the result of research conducted by other groups or individuals. This study benefits from the conclusions of these quantitative research efforts by incorporating their findings as supporting evidence to the qualitative analysis. Key to this portion of the thesis are the quantitative results derived from a Drug Abuse Research Group (DARG) formed in June 1994 at the Naval Postgraduate School, Monterey, CA.

### **1. The Drug Abuse Research Group (DARG)**

The DARG was created within the purview of a research grant sponsored by The Bureau of Naval Personnel, Drug and Alcohol Program Division (Pers-63E). Primary members of the DARG included:

- Mr. Daniel Contreras, Amherst College, (Student)
- Dr. William Gates, NPS Visiting Professor
- Dr. Gregory Hildebrandt, NPS Visiting Professor
- Ms. Jennifer Hildebrandt, Pomona College (Graduate)
- Mr. Samuel Munger, Amherst College, (Student)
- LCDR D. Mark Peterson, NPS Student
- Dr. Katsuaki Terasawa, NPS Visiting Professor
- Ms. Miki Terasawa, Princeton College (Student)

### **2. Statistical Analysis**

A comprehensive statistical evaluation of the 1992 Worldwide Survey and the 1991 NHSDA was conducted by Ms. Jennifer Hildebrandt using Logit analysis.<sup>2</sup> DoD Drug use estimation models (including recursive models) were used to establish relationships between specific variables and the probability of

---

<sup>2</sup>For further discussion of Logit analysis see Pindyck & Rubinfeld, *Econometric Models and Economic Forecasts*, McGraw-Hill, 1991.



drug abuse (Hildebrandt, 1994). The following list provides the three primary objectives of her research.

- Identify a **profile** for DoD drug use using logit analysis and the 1992 Worldwide Survey.
- Establish a **comparison model**, using logit analysis, for drug use utilizing both civilian (NHSDA) and Military (Worldwide Survey) data.
- Examine existing literature which compares military and civilian drug abuse.

### **3. Cost Analysis**

Ms. Miki Terasawa completed a study entitled: "Estimation of Invisible Costs: Drug Abuse Costs to the Navy before Detection." Her paper develops a conceptual framework to identify and estimate the invisible costs of drug abuse in the Navy. Experimental regressions were conducted on the model she formulated using hypothetical data. Increased hospitalization due to drug abuse is the subject of the analysis. Unknowns such as the rates of addiction and detection are estimated. In addition to the conceptual model, Ms. Terasawa conducted an exhaustive literature search on the costs of drug abuse using DIALOG Information Services. The literature search resulted in 1,260 items being accessed, examined, and either pursued or rejected. No studies were found which directly focused on the invisible costs of drug abuse in the Navy (Terasawa, 1994).<sup>3</sup>

---

<sup>3</sup>Terasawa interviewed (by phone) three acknowledged experts at the Research Triangle Institute (RTI) who have worked extensively with Drug Abuse {Anderson, Bray, & French}. All three verified the lack of concrete studies that approach a credible estimation of social cost associated with drug abuse; however, several conceptual models do exist. See Terasawa's research for a discussion of these other cost models.

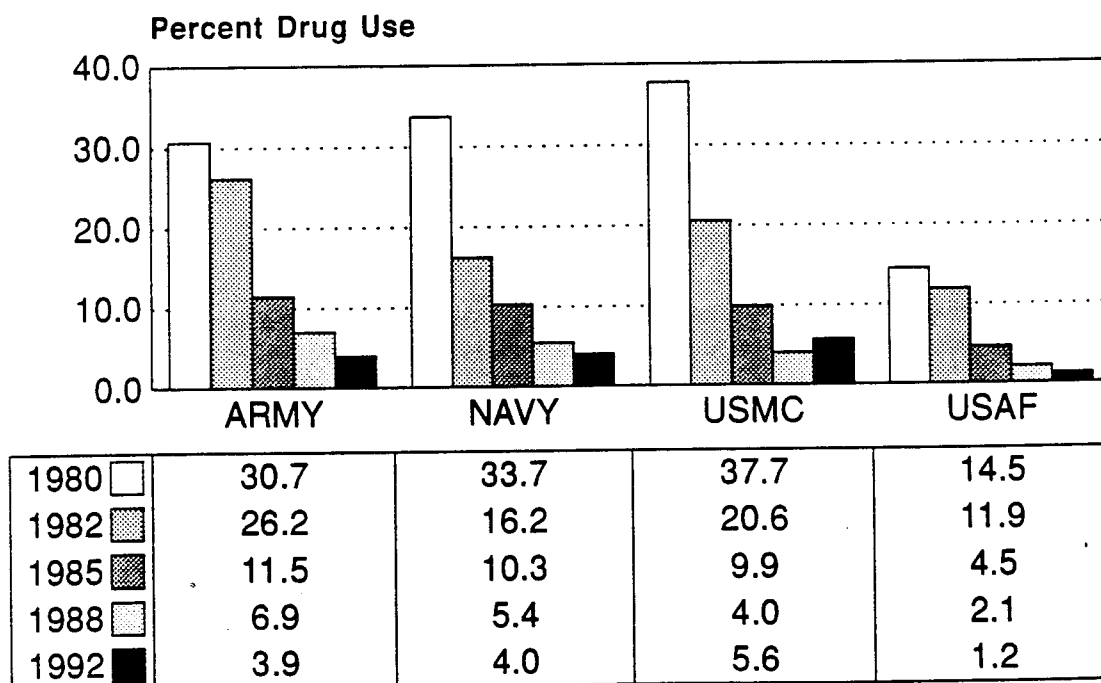


### III. BACKGROUND OF DRUG ABUSE POLICIES AND PROGRAMS

This chapter reviews the historical background and current status of the National, Department of Defense (DoD), and Navy drug control policies. National drug control policies are discussed particularly as they relate to the DoD and Navy programs. The primary Navy drug abuse prevention programs are illustrated, with special emphasis given to drug testing (through urinalysis) and the Personal Responsibility and Values Education and Training (PREVENT) program.

There have been many policy adjustments to the Navy and DoD drug abuse programs. During this period, drug use by military personnel has declined steadily. Figure 3-1 graphically illustrates the reduction for each Service.

#### DoD HISTORICAL DRUG TRENDS (Any Drug Use in the Past 30 Days)



**Figure 3-1: DoD Historical Drug Trends**

Source: 1992 Worldwide Survey

## **A. HISTORICAL BACKGROUND OF NAVY DRUG CONTROL POLICIES**

The history of the Navy's drug control policies are highlighted in the following areas:

- Drug Testing through random urinalysis.
- A slow tightening of the criteria used to administratively separate drug abusers.
- Drug abuse education and training programs introduced through the Navy Alcohol and other Drug Abuse Program (NADAP).
- Programs developed and administered at the command level by personnel assigned collateral duty responsibilities.

By reviewing the chronological listing of major milestones in the Navy's "war on drugs," the development and implementation of these policies can be shown.

### **MAJOR MILESTONES IN DRUG ABUSE PREVENTION INITIATIVES**

#### **1982**

- OPNAVINST 5350.4 is issued (first in a series of drug abuse instructions outlining procedural guidance and responsibilities for the Navy).
- DoD authorizes the use of urinalysis for disciplinary and administrative purposes.
- Drug labs begin testing for cannabinoids (THC). Portable urinalysis testing equipment (for THC) is distributed.
- The Officers and Chief Petty Officers (CPOs) "one drug incident and you're out" policy is established. E-1 to E-6 personnel are given greater flexibility.

### 1983

- The fifth Navy drug screening lab is established. Labs are converted to forensic operation, significantly reducing false positives from approximately 0.5% to zero (as of September, 1994).
- Education video produced on the drug testing process: Title, "Navy Drug Screening: Basic Tool for Zero Tolerance."
- Navy Alcohol Safety Action Program (NASAP) and the Navy Drug Safety Action Program (NADSAP) curricula combined.
- Substance Abuse Coordinator (SAC) curriculum developed and instruction initiated.

### 1984

- Gas Chromatography/Mass Spectrometry (GC/MS) process begins at the Navy drug labs to assist in confirming positive urinalysis reports.
- General Military Training (GMT) module on drug and alcohol abuse distributed fleetwide.

### 1985

- Portable kit urinalysis testing is discontinued.
- Radioimmunoassay (RIA) screening and GC/MS confirmation required at all drug labs. THC cut-off levels reduced.
- Drug abuse policy is tightened. Two confirmed positives requires mandatory separation for E-1 through E-6. Officer and CPO policy of separation after first incident remains in effect (NAVOP 125/85).
- Alcohol and Drug Abuse Manager and Supervisors (ADAMS) course developed.

### 1986

- Drug labs lower cut-off levels for THC and cocaine.
- Urinalysis policy tightens for new recruits. Drug test showing THC positive on arrival at basic training is counted as first drug incident (service record documents incident). Prior to this, the first 48-hour THC positive was not documented or counted as an initial incident.

### 1990

- Drug abuse policy tightens. Junior enlisted (E-4 and above) are processed for separation after the first drug incident.

### 1992

- Drug abuse policy tightens. All E-1's and above are mandatorily processed for separation after a first-time drug abuse offense.
- Drug labs lower cut-off levels on three drugs (THC, Cocaine, and Amphetamines).

### 1993

- SECNAV directs NADSAP name change to PREVENT due to additional course content and the prevention education nature of the training (which had been added since 1990). The additional behavioral issues added to the PREVENT program include, sexual responsibility (e.g., sexual assault & HIV/AIDS), suicide prevention, core values, communication skills, stress reduction, and other high risk characteristics.

## **B. CURRENT NAVY DRUG CONTROL POLICY**

The Navy today has one simple drug abuse policy for all its service members: mandatory processing for separation of all first-time drug abuse offenders. Those individuals who are medically diagnosed as drug-dependent are offered Veterans Administration treatment at the time of their separation. Random urinalysis is conducted monthly at every Navy command at a 10-20 percent rate. The urinalysis is truly random, from the most senior officer down to the seaman recruit (E-1).

Drug testing through urinalysis is the primary emphasis of the Navy's detection and deterrence policy for controlling drug abuse in the Navy. In a 1992 policy message, zero tolerance was defined as including all pay grades

(E-1 and above). For the first time, a true zero tolerance policy was initiated throughout the Navy. In the policy message, drug testing was given credit for being an effective means of detering drug abuse (CNO, 1992). In fact, the Navy's office of Drug and Alcohol Abuse Prevention (Pers-63) contends that "urinalysis is the single most effective program for deterring and detecting illicit drug use" (Pers-63, 1994).

The impact and importance of random drug testing appears to be growing. The Commander-in-Chief of the Atlantic Fleet (CINCLANTFLT) recently showed concern at the wide variance in drug testing within his commands. He tightened the 10-20 percent monthly testing rate in the following message:

CINCLANTFLT commands are directed to review {their drug testing programs} and establish a goal of maintaining a minimum {monthly} rate of 18-20 percent command testing. If you think you need to do {more testing} more often, do it. Drugs are still out there. (CINCLANTFLT, 1994).

### **C. NATIONAL AND DOD DRUG CONTROL POLICY**

The national drug control policy has directly impacted the DoD drug policies by directing resources from purely military uses to the broader national scope. Prior to 1989, DoD's primary Counterdrug (CD) mission involved supporting military personnel demand reduction programs (e.g., drug testing and education). There was not a centralized CD program (or budget), and limited military involvement in the national regime consisted of *ad hoc* missions in support of various Drug Law Enforcement Agencies (DLEAs). By the mid to late 1980's, the national drug habit was viewed as reaching a crisis level. Drug-related crimes increased dramatically during this period and public opinion peaked, with a majority of Americans identifying drug use as the greatest threat facing our nation (National Drug Control Strategy (NDCS), 1992).

Congress began to look for a military response to the illegal drug flow into the country.

In 1986, The House of Representatives passed an amendment that would have directed the military services to become the primary interdiction agency and required DoD to "seal the borders" within 45 days after the passage of the act (Reuter, 1988). The amendment failed in the Senate, but the 1986 Omnibus Drug Control Act marked a significant milestone in the military's involvement in drug interdiction. In 1989 President Bush announced a comprehensive National Drug Control Strategy and on September 18, 1989, Secretary of Defense Dick Cheney stated:

The supply of illicit drugs to the United States from abroad, the associated violence and international instability, and the use of illegal drugs within the country **pose a direct threat to the sovereignty and security of the country.** (Ahart & Stiles, 1991)

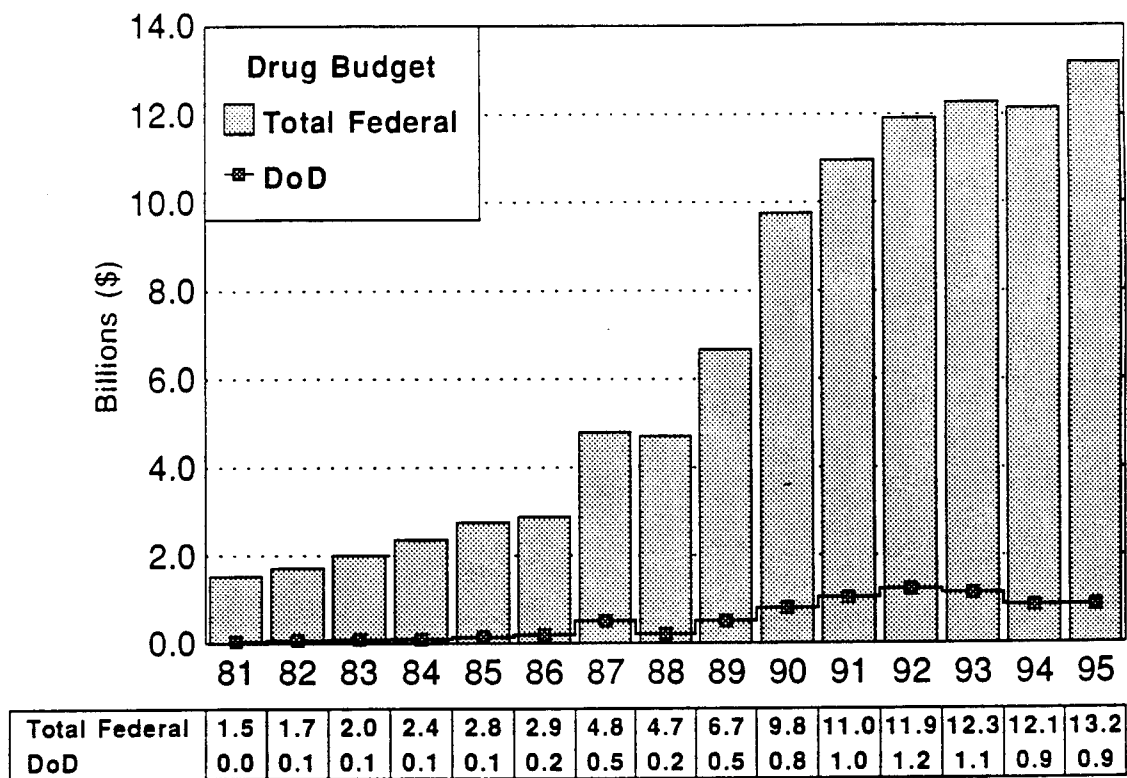
Congress responded with far-reaching, congressionally mandated DoD missions in the FY-89 Defense Authorization Act. The act, detailed in the Congressional Hearing on Federal Drug Interdiction Efforts (1991), directed DoD to:

- Serve as the single lead agency of the Federal Government for the Detection and Monitoring (D&M) of aerial and maritime transit of illegal drugs into the United States.
- Integrate into an effective communications network the Command, Control, Communications, and Technical Intelligence (C3I) assets of the United States that are dedicated to the interdiction of illegal drugs.
- Approve and fund state governors' plans for enhanced drug interdiction and counterdrug role for the National Guard in "state status."

In 1990 and 1991, congress expanded the DoD role. The CD mission was given a higher priority as a National Security Objective (Comprehensive Review DoD Counterdrug Program, 1994). Funding was consolidated and

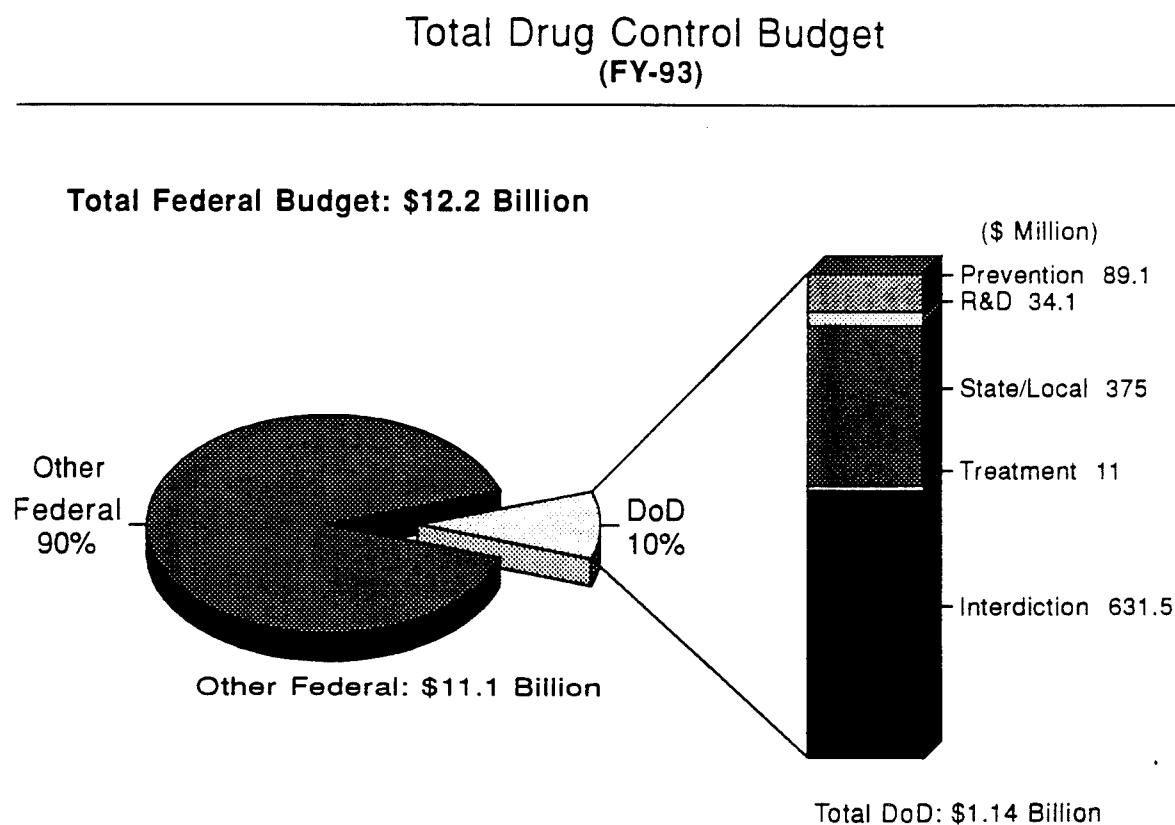


resources were dramatically increased for the military to expand its "internal war" into a "national war on drugs." Figure 3-2 shows the rapid increase in the total federal CD budget from FY-81 to FY-95. The DoD portion of the budget is graphically depicted overlaying the total federal CD budget.

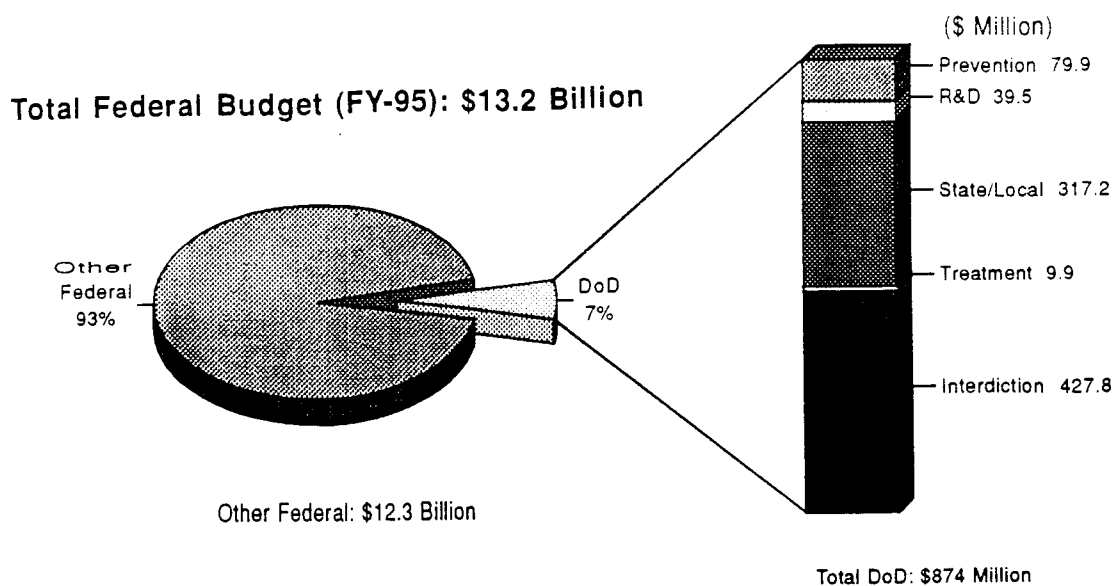


**Figure 3-2: Total Federal and DoD Drug Control Budget**  
Source: National Drug Control Strategy, 1994

The FY-95 federal budget includes a record \$13.2 billion request for the current administration's new anti-drug strategy. While the overall federal strategy boosts spending on treatment and prevention throughout many governmental agencies, DoD's drug control budget was reduced by 23.4 percent (the most significant reduction of any federal agency). Interdiction funding dropped by over \$200 million, but there were also drops in the demand reduction portions of the DoD budget which were passed along to each of the military services. The Demand Reduction budget line contains the Navy's drug prevention program funding, which has actually decreased over the past three years. Figures 3-3 and 3-4 illustrate the shift in resources from DoD to the other federal agencies:



**Figure 3-3: Total Federal and DoD Drug Budget (FY-93)**  
Source: National Drug Control Strategy, 1994



**Figure 3-4: Total Federal and DoD Drug Budget (FY-95)**

Source: National Drug Control Strategy, 1994

Table 3-1 depicts the DoD drug resource funding decline from FY-93 to the FY-95 budget request.

<i>Drug Resources by Function</i>	<b>FY-93</b>	<b>FY-95</b>	<b>% CHANGE</b>
<b>Prevention</b>	\$89.1	\$79.9	(10.3)
<b>Research and Development</b>	34.1	39.5	15.8
<b>State and Local Assistance</b>	375.0	317.2	(15.4)
<b>Treatment</b>	11.0	9.9	(10.0)
<b>Interdiction</b>	631.5	427.8	(32.2)
<b>Total:</b>	1140.7	874.2	(23.4)

**Table 3-1: Department of Defense Drug Control Budget (\$ in Millions)**  
Source: National Drug Control Strategy (Budget Summary), 1994

While the Federal drug control budgets have been growing rapidly, the DoD budgets are being significantly reduced. Large parts of this reduction are in the area of drug interdiction, but as Table 3-1 reveals, all but the R&D funding lines have incurred notable decreases.

The Navy's own counterdrug resources have been consolidated since 1990 within the DCNO (Plans, Policy, & Operations) Counterdrug Branch (N-515). The Navy's drug prevention programs are now tied directly to the same DoD budget requests that contain the congressionally mandated "war on drugs" initiatives. Table 3-2 illustrates the FY-92 through FY-94 breakdown of the Navy's CD demand reduction budget. The FY-94 \$24.5 million demand reduction budget line accounts for approximately 12 percent of the Navy's total \$220 million CD budget (CD Spreadsheet, 1994).

#### **D. THE NAVY DRUG CONTROL PROGRAMS**

"Alcohol and Drug Abuse Prevention and Control" is the subject of OPNAV Instruction 5350.4B. It details the Navy's drug control programs and is the guiding policy containing all the elements of the Navy Alcohol and other Drug Abuse Program (NADAP). NADAP focuses on drug testing and education as the primary means of attacking drug and alcohol abuse in the Navy.

It is difficult to separate drug abuse from alcohol abuse in the Navy's NADAP program since the mode of addressing these addictive and destructive behaviors is similar; however, the obvious difference is that any form of drug abuse is illegal. The Navy recognizes alcoholism as a treatable disease (ADAMS Resource Guide, 1993) but considers drug abuse as simply an illegal activity (whether or not it is treatable). Therefore, the NADAP drug abuse efforts are directed primarily at drug testing, with any preventive and education benefits derived from spin-off alcohol abuse training.

**PROJECT #8351/USN DEMAND REDUCTION BUDGET  
(\$000)**

ACCOUNT	FY-92	FY-93	FY-94
1. CNO 9BF	85	85	**00
2. DDRTF	2,659	4,080	826
3. BUMED	18,998	17,939	18,315
4. NAVAIR	11	3	00
5. BUPERS	2,656	*1,984	1,358
6. NAVFAC	53	55	36
7. SSPO	21	11	**00
8. CINCLANTFLT	354	365	230
9. CINCPACFLT	51	53	23
10. CINCPACFLT	164	169	160
11. CNET	2,329	2,309	**1,546
12. NAVTELCOM	23	24	00
13. NAVY KIDS	00	6	00
14. OCPM	00	00	920
15. COMMUNITY OUTREACH	00	00	1,136
15. RPN	00	00	45
<b>TOTAL:</b>	<b>27,404</b>	<b>27,083</b>	<b>24,595</b>

**Table 3-2: USN Demand Reduction Budget (FY93-FY94)**

Source: Office of Budget and Reports (NCB 1)

\* Includes additional \$500 for OPN.

\*\* Drop is a result of Drug Testing Funds shift to OCPM

**NOTES:**

1. DDRTF- Drug Demand Reduction Task Force (also controls Community Outreach Acct)
2. OCPM - Office of Civilian Personnel Management assumed responsibility for Navy civilian drug testing in FY-94.
3. SSPO (Submarine Strategic Program Office). Drug Testing funds for Civilian drug testing move to OCPM in FY-94
4. In 93/94 CNO 9BF Included NPS and Military District, Washington. FY-94 funds moved to different accounts.
5. FY-92/93 is Obligation Data, FY-94 is Allocation Data.
6. Community Outreach is O&M,N Funding.

The primary programs with relationships specifically addressing drug abuse include:

### **MAJOR USN DRUG CONTROL PROGRAMS**

- Drug testing through urinalysis
- PREVENT (Level I) education and intervention
- Alcohol and Drug Abuse Managers and Supervisors (ADAMS)
- Drug and Alcohol Program Advisor (DAPA) program
- Other Training/Education:
  - Initial level recruit training (4 hours)
  - Command Indoctrination
  - General Military Training (GMT)
  - Miscellaneous Leadership Education

Even though these programs specifically reference drug abuse in some form, they also address alcohol and other high-risk addictive behaviors. In some cases, drug abuse is a minor topic compared with other course material. It is an accurate observation to state that the only "pure" drug abuse prevention tool the Navy employs today is drug testing.

The rest of this section will discuss the first four major drug control programs listed above. The "Other Training/Education" programs are not addressed due to their numerous components and the wide variation (concerning amount and quality of drug abuse education) in each course.

#### **1. Drug Testing (Urinalysis Program)**

Drug testing is the cornerstone of the Navy's drug prevention program. From a resource perspective, the urinalysis program is given the "highest

priority" in the CD prevention budget.<sup>4</sup> At least 90 percent of the \$24.5 million FY-94 CD budget supports the drug testing program. Randomly sampling 10-20 percent of Navy personnel every month requires testing almost 2 million samples each year. Table 3-3 depicts the number of urine samples tested and the confirmed number of drug positives over the past nine years:

<b>NAVY URINALYSIS</b>	<b>FY-85</b>	<b>FY-87</b>	<b>FY-89</b>	<b>FY-91</b>	<b>FY-92</b>	<b>FY-93</b>
Samples tested (Million)	1.82M	2.3M	2.06M	1.75M	1.81M	1.68M
Number Positive (Thousand)	54K	47K	30K	11K	14K	13K
Percent Positive	2.98%	2.37%	1.45%	.64%	.78%	.81%

**Table 3-3: Navy Urinalysis Testing Program**  
Source: Chief of Naval Technical Training, 1994

***a. Drug Testing of New Accessions***

Drug testing is a key disqualifier when new accessions first enter the Navy. Under the purview of The Chief of Naval Education and Training (CNET), all new recruits are tested immediately upon entering basic training. Besides the drug testing, new recruits are screened through a process called a "moment of truth." This occurs within the first few days after the recruit enters basic training. The recruits are told they have "one last chance" to reveal personal disqualifiers they might be concealing (e.g., lying about their age, use of drugs, felonies, etc...). Any recruit indicating that they have lied

---

<sup>4</sup>Based on interview with Captain M. Weisberg, USN, DCNO (Policy, Plans, & Operations) Counterdrug Branch (N-515) by the author on 09 August 1994.

is taken to a "moment of truth" interview where they are evaluated. Table 3-4 shows those new entrants who were discharged for drug abuse from urinalysis and the "moment of truth" interviews.<sup>5</sup>

<b>NEW ACCESSIONS</b>	<b>FY-87</b>	<b>FY-89</b>	<b>FY-91</b>	<b>FY-92</b>	<b>FY-93</b>
Urinalysis Testing <sup>5</sup>	1,456	1,056	1,122	631	939
"Moment of Truth" Interview	-----	351	366	525	442
<b>TOTALS:</b>	1,456	1,407	1,488	1,156	1,381

**Table 3-4: New Entrant Separations For Drug Abuse**  
Source: Chief of Naval Technical Training, 1994

Each new recruit assigned to a Navy "A" school after basic training goes through an additional drug test upon reporting for duty at the training command. CNET alone tested approximately 255,000 samples in FY-93 (Interview with Massengill, 1994).

First-term recruit attrition is approximately 30 percent annually. In an effort to decrease this rate, the Navy implemented a psychological screening program (N-AFMET) in October 1991. This program is based on the Air Force's AFMET program.<sup>6</sup> The USAF has successfully used AFMET since the mid 1970's to screen out USAF recruits likely to attrite. The N-AFMET is a three-phased psychological screening process conducted within the first 48-hours after a recruit arrives at basic training. First-year results revealed that out of the 713 recruits separated in 1991 due to the N-AFMET program, 36

---

<sup>5</sup> Positive drug test numbers in this Table are not reflected in the "number positive" results shown in Table 3-3.

<sup>6</sup> AFMET is the Air Force Mental Evaluation Test. Implications of the AFMET program are discussed in greater detail in Chapter IV.



percent had some variation of an alcohol or drug related diagnosis. A significant proportion (9.8 percent) were diagnosed as alcohol or drug dependent (Idar and Scaramozzino, 1992).

***b. Quality Control (QC) In Drug Testing***

Due to the severe implications of a false positive report on a drug sample, the Navy's drug screening laboratories conduct rigorous QC programs. At least 20 percent of all samples tested are the labs' own quality control specimens, and approximately one-fourth of each lab's annual budget is spent within the quality control department (San Diego Drug Screening Laboratory, 1994). Additionally, each lab undergoes six inspections throughout the year. One of these inspections includes certified inspectors from the National Institute on Drug Abuse (NIDA) who are experts in the field of forensic drug urinalysis.

The external QC program is conducted by the Armed Forces Institute of Pathology (AFIP). AFIP has been providing quality control for over 20 years. The QC program is divided into two segments, the Open Proficiency and the Blind Proficiency Test.<sup>7</sup>

(1) The Open Proficiency Test. In the open proficiency test, AFIP sends between 20 and 24 positive control samples each month to the drug labs. The labs know the samples are positive; their goal is to determine the drug and concentration level in each sample. The samples are "spiked" at a point near the cut-off level to judge the accuracy of the test-measuring instruments. AFIP tabulates the results and provides a monthly statistical feedback report to each lab.

---

<sup>7</sup> Much of the information concerning the AFIP testing procedures was gained through a phone interview with Lt. Col. Kuhlman, USAF, AFIP (Drug Detection and Quality Control Lab) by the author on 30 August 1994. Lt. Col. Kuhlman also provided written background and briefing papers on the testing process.

(2) The Blind Proficiency Test. The blind proficiency test is the most critical aspect of the QC program. Approximately 624 samples are sent to each DoD lab every quarter via command level organizations. The samples are labeled with fake social security numbers and submitted with the commands' normal monthly submission. About 80 percent of these AFIP control samples are negative (i.e. contain no drugs) while approximately 20 percent are positive (contain drug concentrations above the allowed cut-off rate). AFIP uses this proficiency test to verify that the labs are accurately diagnosing routine urine samples and properly reporting the results.

### ***c. Reliability***

Maintaining the reliability of the drug laboratories is a primary mission of the AFIP Drug Detection and Quality Assurance department. A twenty-year study of quarterly blind QC reports revealed an extremely effective and reliable drug testing program (Kuhlman & Smith, 1993). The results show that in the early years (prior to 1983) the laboratories produced false positive rates of about 0.5 percent and false negative rates of approximately 12 percent. Since 1983 there have been no true laboratory false positive reports in over 183,000 samples. The false negative rate is less than two percent. The labs have proved to be exceptionally reliable in every area. The report finds that the weakest link in the drug test procedure is the collection site (e.g., inverting several of the social security numbers on a sample).

## **2. The PREVENT Program<sup>8</sup>**

The Navy first established contracted substance abuse education programs in 1974. The purpose of these early programs was to provide

---

<sup>8</sup> Portions of this section were obtained through an interview with Ms. Camille Ross and Ms. Viktoria Johnston (San Diego PREVENT office) by the author on 15 July 1994.

training for individuals after an alcohol or drug related incident. Since then, the program has changed names and focus several times. Program titles for the Navy's substance abuse programs have included:

- Navy Alcohol Safety Action Program (NASAP)
- Navy Drug Safety Action Program (NDSAP)
- Navy Substance Abuse Prevention Program (NASAPP)
- Navy Alcohol and Drug Safety Action Program (NADSAP)
- Personal Responsibility and Values Education and Training (PREVENT)

The change to PREVENT occurred in 1993 at the direction of the Secretary of the Navy. The course was modified to include a number of other behavioral issues, with a "prevention" vice "after-incident" focus. Approximately 80 percent of PREVENT attendees are purely "prevention oriented" (i.e., they are not attending the course as a result of an alcohol or drug related episode).

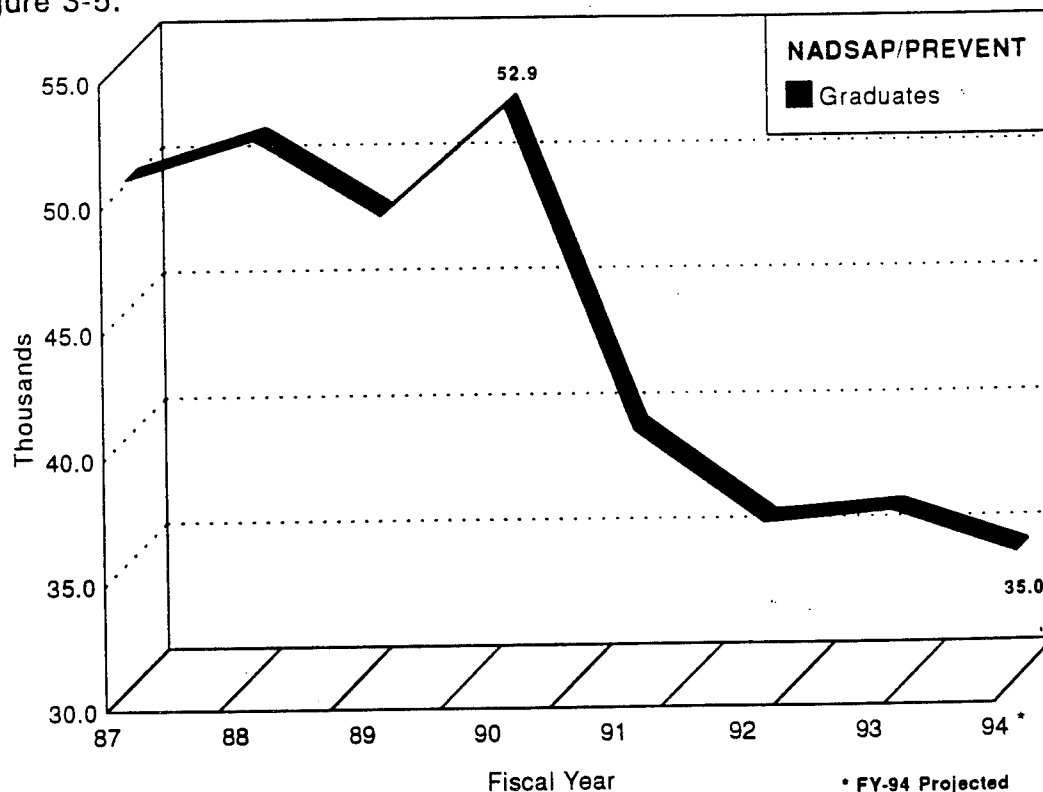
***a. Background***

PREVENT, as the name implies, focuses on the personal responsibility issues facing each person who attends. The course content addresses pressures and addictions toward alcohol, drugs, sexual behaviors and other health related issues. As the PREVENT contractor's course description explains, the goal of PREVENT is to change destructive behaviors through the conscious control of one's mental, verbal, or physical responses (PREVENT

Profile, 1993). The 32 hours (one week) of classroom instruction and the four hours of independent assignments focus on developing skills of:

- Adaptability
- Decision making
- Resistance to addiction practices
- Interpersonal responsibility

PREVENT contract offices provide services at thirty-one main sites and over 100 ancillary locations. The program serves approximately 2,600 commands, both ashore and afloat. The course is highly flexible, with weekend, night, and even deployed variations possible. The historical number of personnel completing the NADSAP/PREVENT program is graphically depicted in Figure 3-5.



**Figure 3-5: NADSAP/PREVENT Graduates**

Source: Pers-63, 1994

Students attending PREVENT complete a questionnaire before and after the course of instruction. Additionally, representative samples of graduates are surveyed three and twelve months following the course. Using the questionnaire and follow-up surveys, the contractor is able to make quantitative estimates concerning the effectiveness of the PREVENT training. These estimates are discussed further in Chapter IV of this thesis.

#### ***b. PREVENT Funding***

PREVENT is a \$3.5 million Times and Material contract funded through multiple sources including:

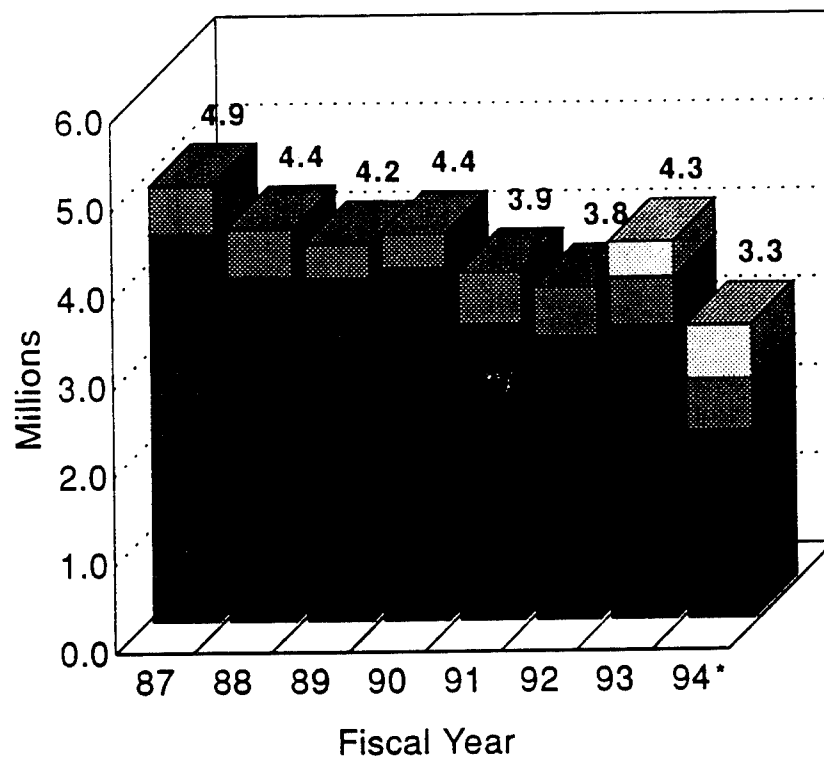
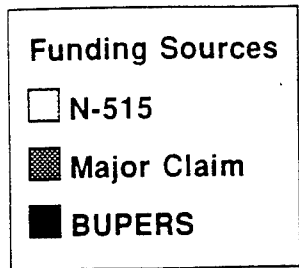
- BUPERS 63
- DCNO (N-515) Drug Demand Reduction Office
- Major Claimants
- Local Commands

The PREVENT resource sponsor is N-1 (via BUPERS), while the major claimant and program management responsibilities are shared between BUPERS and CNET.<sup>9</sup> Figure 3-6 shows the historical trend in funding provided PREVENT over the past few fiscal years. Funding shortfalls are generally absorbed by reducing the number of classes. An unanticipated cut of one million dollars in PREVENT funds during FY-94 resulted in canceling several courses (especially those courses planned for deployed units).<sup>10</sup> The curriculum was also shortened by four hours, but this may have been a coincidence.

---

<sup>9</sup>N1 (DCNO, Manpower & Personnel) is the Support Resource Sponsor. The funds are routed through BUPERS.

<sup>10</sup>Though the initial cut was \$1 Million, some additional funds were redirected to help make-up the shortfall. The actual cut for FY-94 came to approximately \$700K. However, PREVENT classes were still postponed or canceled.



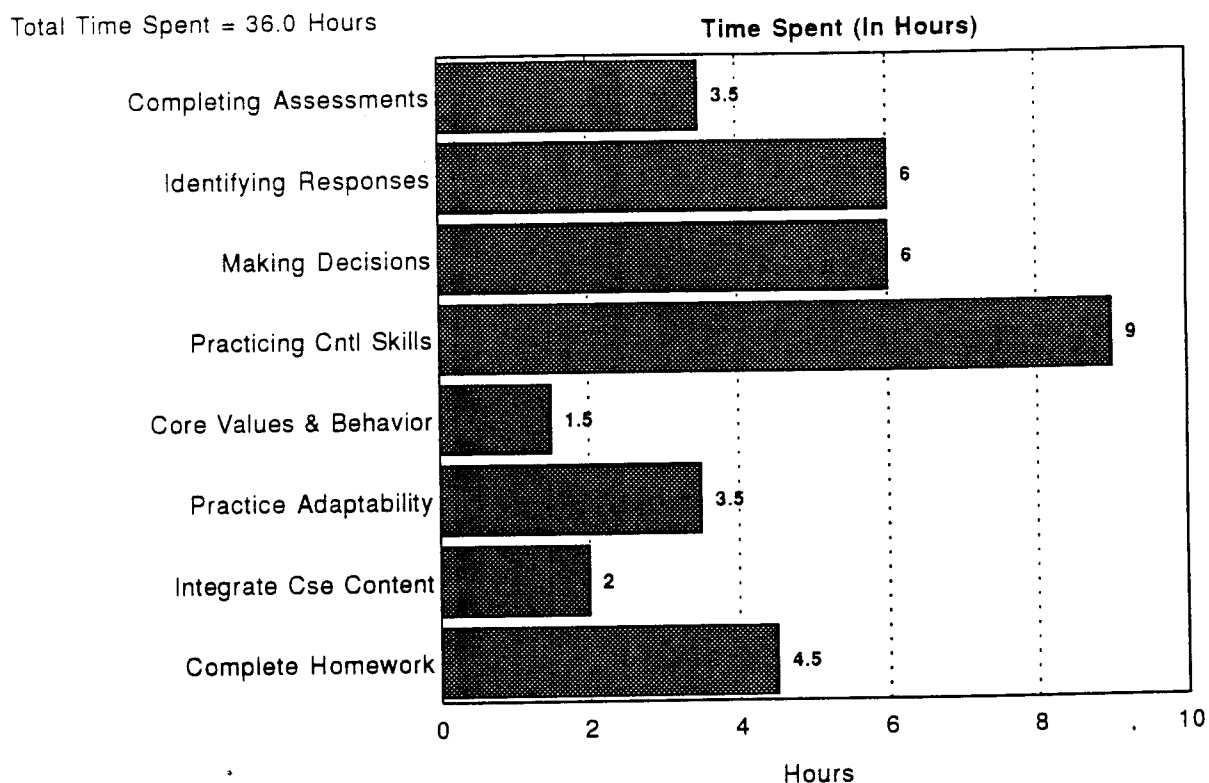
**Figure 3-6: NADSAP/PREVENT Resource Funding**

Source: Pers-63, 1994

\* FY-94 Projected

**c. PREVENT Methodology and Course Content**

The PREVENT class size typically ranges from 15 to 20 persons. The course is facilitated by a professionally trained leader who uses small group techniques in a "peer interaction model" (PREVENT Fact Sheet, 1993). PREVENT's target audience is enlisted personnel in their first five years of service. The American Council on Education has certified PREVENT for two semester hours and The University of Arizona (Extended University) offers 3.6 Continuing Education Units to those who have completed the course. Figure 3-7 illustrates the amount of time PREVENT devotes to various behavioral issues.



**Figure 3-7: PREVENT Curriculum Topics**

Source: PREVENT Fact Sheet, 1993

Within these behavioral issues are specific sections involving a wide range of topics, including:

- Alcohol and Drug Abuse
- Other Substance Abuse (e.g., nicotine and tobacco)
- High-risk Sexual Behavior (e.g., AIDS/HIV, promiscuity, and unprotected sex)
- Sexual Harassment and Assault
- Obesity/Physical Fitness
- Stress Reduction
- Suicide Prevention
- Navy/USMC Core Values
- Communication Skills

The group setting of the PREVENT class is relaxed and informal.<sup>11</sup> The instructor is a civilian who has been trained in controlling and facilitating group dynamics. The students are provided a course workbook that contains the syllabus shown in Table 3-5.

---

<sup>11</sup>The thesis author attended the PREVENT course offered in San Diego, CA (July 1994). Methodology and course content is provided from personal observation and the course workbook.



## **PREVENT COURSE SYLLABUS**

- I. PREVENTION EDUCATION FOR ORGANIZATIONAL READINESS AND INDIVIDUAL READINESS**
  - A. Prevention Education and Skills for Personal Control in the Military Environment
    - 1. Core Values
    - 2. Rights and Responsibilities
    - 3. Total Quality Leadership
  - B. Prevention Education and skills for Personal Control in the On Duty Environment
    - 1. Personal Fitness Practices
    - 2. Personal Behavior and Competency for Duty
  - C. Prevention Education and Skills for Personal Control in the Off Duty Environment
    - 1. Personal Fitness Practices
    - 2. Personal Behavior
- II. ADDICTION PRACTICES**
  - A. The Concept of Attachment
    - 1. Attachment and External and Internal Standards
    - 2. Tracking Personal Attachments
    - 3. Family History and Attachments
  - B. Determining Attachments in Situations
    - 1. To Alcohol and other Substance Practices
    - 2. To Sexual Practices
    - 3. To Physical Activity Practices
    - 4. To Nutrition Practices
    - 5. To Mental, Verbal, and Body Reactions
  - C. Consequences of Attachments in Situations
    - 1. To Alcohol and other Substance Practices
    - 2. To Sexual Practices
    - 3. To Physical Activity Practices
    - 4. To Nutrition Practices
    - 5. To Mental, Verbal, and Body Reactions
  - D. Mental, Verbal, and Body Response Skills to Apply to Attachments in Situations
- III. ADAPTABILITY**
  - A. The Concept of Pressure
    - 1. Sources of Pressure in Situations (Internal & External)
  - B. The Mental, Verbal, and Body Responses Indicative of Pressure in Situations
  - C. Duration of Pressure
    - 1. Short and Long term
    - 2. Pressure and Suicide
  - D. Mental, Verbal, and Body Response Skills to Respond to Pressure in Situations
  - E. Personal Commitments and Probabilities Regarding Responsible Action: in Military Situations, in Alcohol and other Substance Related Situations, and in Sexual Situations.
- IV. DECISION MAKING**
  - A. Individual Responses in the Behavior Change Process
    - 1. Selecting a Goal and Taking Action
    - 2. Personal Style in the Actual Situation
    - 3. Examining Alternatives and Consequences
    - 4. Acknowledging Limits for Personal Change
    - 5. Personal Commitment to Behavior Change
    - 6. Mental, Verbal, and Body Response Skills for Maintaining Change in Situations

**Table 3-5: PREVENT Course Syllabus**  
Source: PREVENT Course Workbook

### 3. Alcohol and Drug Abuse Managers/Supervisors (ADAMS)

The ADAMS course is a one-day training seminar designed for managers and supervisors. OPNAVINST 5350.4B requires all managers and supervisors to attend ADAMS at least once in their naval career.<sup>12</sup> There are two versions of ADAMS (OPNAVINST 5350.4B):

- **Managers Version:** Developed for commanding officers and senior enlisted managers (e.g., command master chiefs). Teaches the managers how to develop and evaluate effective command programs.
- **Supervisors Version:** Designed for E-7 supervisors and above. Trains the supervisors on how to counsel junior personnel concerning substance abuse. It also teaches the skills to recognize substance abuse and how to properly document problems related to the abuse.

ADAMS training began in 1985 after DoD mandated education and training in alcohol and drug abuse prevention. The DoD instruction directs the military services to:

...educate and/or train all military commanders, military and civilian supervisors...{about} alcohol and drug abuse prevention policy and effective measures to alleviate problems associated with alcohol and drug abuse. (DoDINST 1010.5)

N-1 (via BUPERS) is the resource sponsor of ADAMS. BUPERS and CNET both serve as the major claimants and program managers.

---

<sup>12</sup>OPNAVINST 5350.4B is currently being revised. Future revisions will require all Navy supervisors E-6 through O-4 to attend ADAMS (ADAMS Facilitator Manual, 1993).

#### **4. Drug and Alcohol Program Advisor (DAPA) Program**

All Navy commands, regardless of their size, are required to have a DAPA. As described in OPNAVINST 5350.4B, the DAPA is responsible to the commanding officer for managing and administering the command's alcohol and drug abuse program. In addition, the DAPA oversees the command's obesity aftercare program.

The DAPA is encouraged to be a "top-performing" volunteer who is an E-6 or above. All DAPAs must serve in their assignment for at least one year. Commands having more than 1,000 personnel must have a full-time DAPA assigned; smaller commands are allowed to assign the DAPA role as a collateral duty. Other requirements for holding the DAPA title include the following: (OPNAVINST 5350.4B)

- Completing the DAPA course (A-501-0060).
- No drug or alcohol incident within the last 2 years.
- If recovering from substance abuse, must have 2 years of sobriety.
- If recovering from chronic obesity, must have 2 years in a program of recovery.
- Mature individual possessing credibility with personnel at every level in the command.

The command DAPA is required to be designated in writing. As stated earlier, the DAPA reports directly to the commanding officer on the command's substance abuse programs. The DAPA's responsibilities include the following: (OPNAVINST 5350.4B)

- Advise the commanding officer on the administration of the command alcohol and other drug abuse programs.

- Conduct administrative screenings of identified alcohol and drug abusers and personnel who do not meet physical readiness standards; report findings to the commanding officer.
- Coordinate the presentation of Level I alcohol and other drug abuse awareness education in the command.
- Establish a Level I intervention program for designated individuals.
- Act as the aftercare coordinator for the command. Coordinate and monitor the aftercare plan for personnel returning to the command after completing the Level I or Level II programs for alcohol and compulsive overeating/food abuse.
- Serve as the command self-referral agent.
- Prepare the Drug and Alcohol Abuse Reports (DAARs) for the commanding officer's signature.

As with the ADAMS program, N-1 (via BUPERS) is the resource sponsor of the Navy's DAPA program. BUPERS and CNET share the responsibility as major claimant and program manager.

#### IV. MEASURING THE EFFECTIVENESS OF DRUG ABUSE PREVENTION

This chapter considers effective methods to prevent drug abuse in the Navy. In its most basic form, "effectiveness" can be defined by how well one achieves a desired result. To give "effectiveness" a scope, there must be a quantifiable measurement along with a meaningful standard. When considering drug abuse prevention in the Navy, the desired result is reduced drug usage. The quantifiable measurement is twofold: (1) *the number of self-reported drug users (as described in the Worldwide survey)*, and (2) *the number of personnel testing positive from a urinalysis test*. The standard is "zero" abuse. Therefore, if the Navy's drug abuse prevention program was perfectly effective there would be no self-reporting drug abusers and no personnel testing positive in random drug urinalysis tests.

The Navy attempts to reduce drug usage through two means: detection and deterrence. As discussed in earlier chapters, drug testing is considered a "major means of detecting and deterring drug abuse" (OPNAVINST 5350.4B). The Navy adds training and education to the deterrence side, primarily through command level education programs (like ADAMS and DAPA) and the PREVENT course. This chapter opens with a discussion of factors influencing drug abuse. Next, the effectiveness of drug testing and PREVENT as tools of detection and deterrence are analyzed. The cognitive/lifestyle approach to behavioral change is reviewed, followed by a brief analysis of effective drug prevention efforts in the Air Force.

##### A. FACTORS INFLUENCING DRUG ABUSE

There have been many studies focusing on the reasons why an individual chooses to abuse drugs. As Contreras and Munger (1994) found in their research comparing civilian and Navy drug prevention programs, researchers

have begun to catalog "risk factors" into two areas: individual and socio-environmental components. Their extensive literature research is illustrated in the following "risk factor" table:

<i><b>INDIVIDUAL FACTORS</b></i>	<i><b>SOCIO-ENVIRONMENTAL FACTORS</b></i>
Antisocial Behavior	Peer drug use
Low academic achievement/goals	Peer deviance
Low religiosity	Peer rejection
Early persistent deviant behaviors	Parental/older sibling drug use
Low self-esteem	Social pressure
Inadequate social bonding	Low socioeconomic status
Emotional outbursts	Lack of social mobility
Non-conventionality	Availability of drugs
Poor relationship with parents	Social stress
Low self-efficacy	Socio-cultural norms favoring use
Alienation/rebelliousness	Family conflict
Lack of conformity	High parental tolerance for deviance
Sensation seeking	Family disorganization
Behavioral disorders	Low bonding to family
Psychological distress or depression	
Early drug experimentation	
Self-derogation	
Aggresivity	

**Table 4-1: Risk Factors For Drug Abuse**

Source: Conteras and Munger, 1994

From a military perspective, Bray et al. determined in the 1992 Worldwide survey that drug abuse is related to a number of sociodemographic and psychological factors (see Table 4-2).

His results correlate drug abuse with the following characteristics:

#### **PREDICTORS OF DRUG ABUSE**

- Male (twice as likely to abuse drugs as females)
- Enlisted ranks (versus officers)
- Pay grade/age (lower pay grades and age groups are more likely to use drugs)
- Hispanic (highest use rates of all races)
- Lower educational level
- Single or not living with spouse

Using regression analysis, Bray et al. found that drug abuse among enlisted males is strongly predicted by whether or not urinalysis testing is being conducted, how others in their social network view drug abuse, and their attitudes about marijuana. The regression revealed similar results to the list shown above. The following are the significant predictors of drug use (among enlisted males), when controlling for other variables using regression analysis:

#### **PREDICTORS OF DRUG ABUSE (identified through regression analysis)**

- Perceived stress at work (greater stress resulted in more drug use)
- Service (drug use was more likely in the USA and USN than the USAF)
- Family status (more likely among single and married-unaccompanied)
- Region (more likely in America than overseas)
- Pay grade (more likely among E1-E3)

CHARACTERISTICS	ARMY	NAVY	MARINE CORP	AIR FORCE	TOTAL DoD
<b>SEX:</b>					
Male	8.1	7.6	10.9	2.5	6.7
Female	5.6	3.0	++	1.5	3.4
<b>RACE/ETHNICITY:</b>					
White	8.2	7.6	12.9	2.0	6.6
Black	6.2	1.7	6.1	2.5	4.2
Hispanic	8.6	12.7	++	5.9	8.9
Other	9.0	3.6	**	1.0	4.4
<b>EDUCATION:</b>					
Less high school Grad	++	++	++	++	++
High school Grad/GED	10.6	8.5	12.5	3.5	9.0
Some college	7.3	6.3	9.9	2.5	5.5
College degree or higher	2.8	2.3	0.9	1.0	1.9
<b>AGE:</b>					
20 and under	13.1	16.0	15.8	3.3	12.9
21-25	12.2	10.3	17.6	3.6	10.3
26-34	6.2	3.7	2.7	2.1	3.8
35 and older	2.8	1.5	1.8	1.4	1.9
<b>MARITAL STATUS:</b>					
Not married	11.7	10.6	14.3	3.9	9.9
Married, not present	8.0	6.4	++	3.1	7.1
Married, spouse present	5.4	3.2	6.2	1.5	3.6
<b>PAY GRADE:</b>					
E1-E3	19.5	17.8	17.8	4.3	15.5
E4-E6	7.7	4.7	8.3	2.7	5.3
E7-E9	2.7	1.5	1.2	1.4	1.9
O1-O3	1.9	1.7	**	0.6	1.2
O4-O10	2.6	0.4	2.3	0.4	1.3
<b>TOTAL</b>	<b>7.7</b>	<b>6.6</b>	<b>10.7</b>	<b>2.3</b>	<b>6.2</b>

**Table 4-2: Any Drug Use (Past 12 Months), Percent by Sociodemographic Characteristics, (Source: 1992 Worldwide Survey)**

Notes: ++ Unreliable Estimate  
 \*\* Estimate rounds to zero



## B. DRUG TESTING: AN EFFECTIVE METHOD OF DETERRENCE?

Drug testing as an effective deterrent is limited largely to a punitive function. Drug testing alone may cause a behavioral modification but the change is a result of a perceived threat (e.g., loss of job), not as a result of a value or moral shift. The detection effectiveness of drug testing (i.e., how well does drug testing identify drug abusers) is subject to a wide range of variables. For example, the timing of the drug test, the method of testing, the chain of custody, lab procedures, and whether the user is "gaming" the system. These are just a few of the possible factors which are beyond the scope of this study.<sup>13</sup> For the purposes of this thesis, the effectiveness of drug testing is analyzed as it pertains to its deterrent function.<sup>14</sup>

### 1. Drug Testing in the Civilian Sector

Drug testing in the civilian sector has become increasingly popular as a deterrence tool. Each year the American Management Association (AMA) conducts a survey of its corporate membership.<sup>15</sup> Over 7,000 U.S. organizations are members of the AMA, accounting for about 25 percent of the total American work-force.

---

<sup>13</sup>LT J.R. Jones, USN, a graduate student at the Naval Postgraduate School, is writing a thesis that specifically looks at the Navy's drug testing policy. The title of the thesis is, *A Change in the Navy's Drug Testing Policy: How Will It Affect Cost and the Probability of Detecting a Drug User*. Publication is expected in the Spring of 1995.

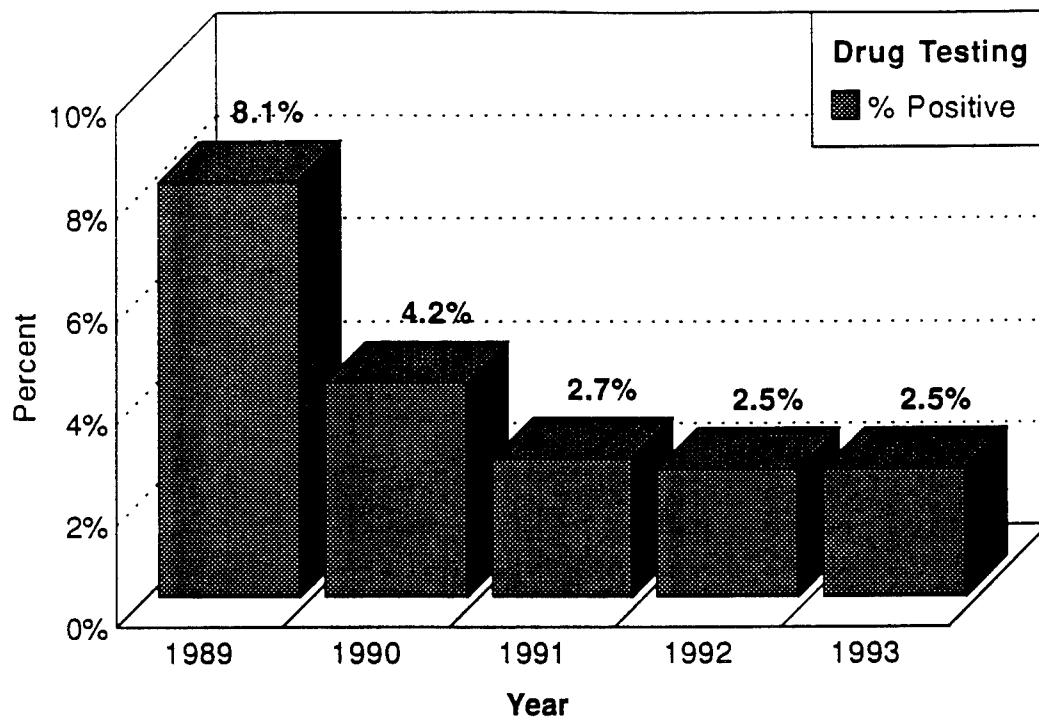
<sup>14</sup> The Navy Personal Research and Development Center (NPRDC) has studied the detection effectiveness issue for drug testing. See Thompson & Boyle, *Markov Chains for Random Urinalysis* (Series), NPRDC, San Diego, CA, January, 1994.

<sup>15</sup> The AMA survey is not considered a statistically accurate sampling of all American corporations, but it is sufficient to allow statistically valid year-to-year comparisons of its member corporations. For the purposes of this thesis, the AMA survey is considered to represent, at the very least, a growing trend in the civilian sector toward increased drug testing.

Since 1987 (when the initial survey was conducted), drug testing among major American corporations has increased by more than 300 percent (AMA Survey, 1994).

AMA found a direct year-to-year correlation between an increase in periodic (or random) testing and a decrease in test-positive ratios. Figure 4-1 graphically depicts the decreasing positive rate of civilian employees identified over the past five years as drug testing increased.<sup>16</sup>

### Civilian Employee Test-Positive Rates



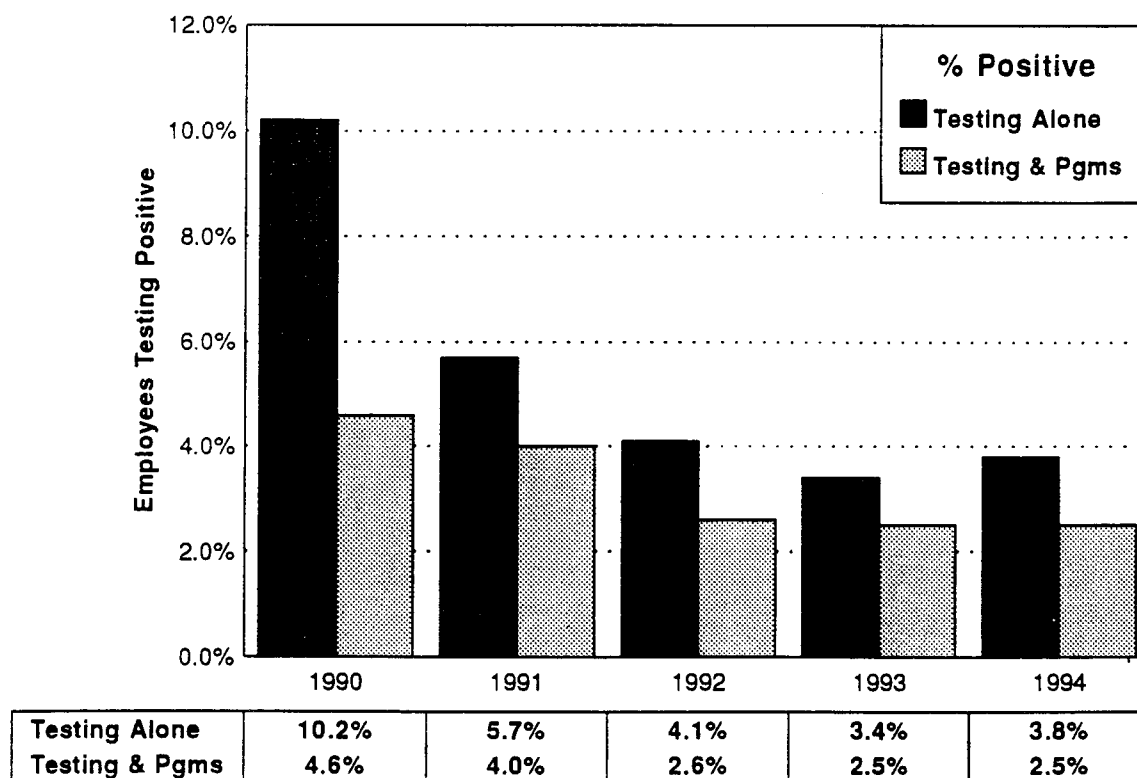
**Figure 4-1: Civilian Employee Test-Positive Rates**

Source: AMA Research, 1994

<sup>16</sup>Drug abuse within the general U.S. population also decreased during this time period, but the decrease was not as dramatic as Figure 4-1 suggest. The 1993 Advance Report of the most recent NHSDA survey shows a drop in the general population's drug abuse from 14.1% (1988) to 11.8% (1993).

One reason for the increase in civilian testing programs is due to government mandate. Department of Transportation regulations, promulgated in 1989, require drug testing in specific job categories. However, according to AMA, 47 percent of the companies reporting drug testing policies were not under government compulsion (AMA, 1994).

Drug testing alone cannot be construed as the only reason for the apparent reduction in drug use by civilian employees. On the contrary, the AMA reports that drug testing is "rarely a stand-alone policy." Only about ten percent of the companies relied on testing alone to deal with employee drug abuse. Companies that provided one or more program initiatives in addition to drug testing (such as education and awareness or supervisory training) report significantly lower test-positive ratios than companies that rely on testing alone. Figure 4-2 below depicts this comparison.



**Figure 4-2: Testing Alone versus Testing With Programs**

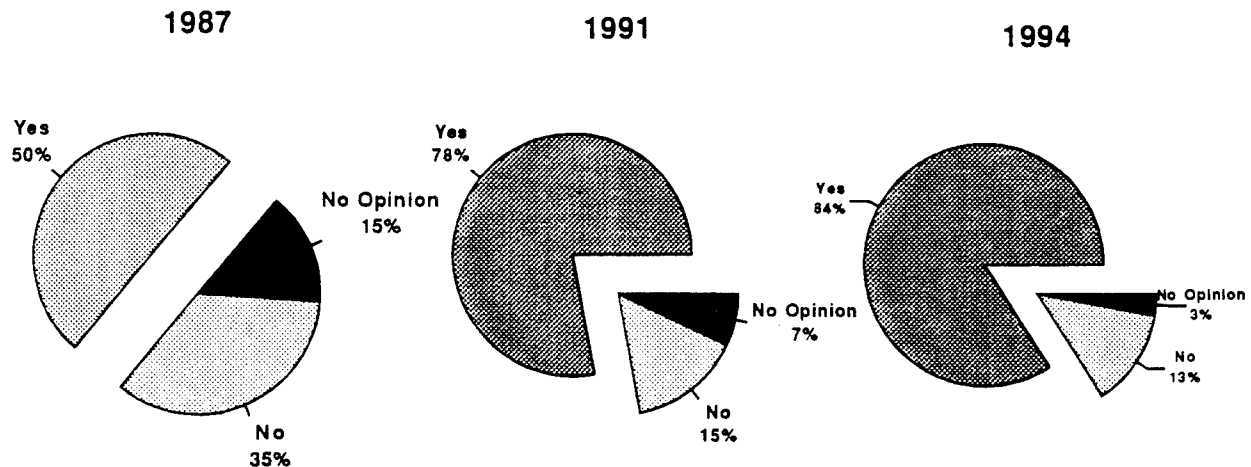
Source: AMA Research, 1994

When civilian corporations were specifically questioned about the effectiveness of drug testing as a deterrent against drug abuse, the overwhelming majority responded affirmatively. The pie-charts in Figure 4-3 illustrate the historical shift in corporate attitudes when asked the question: "Is drug testing effective?"

---

### Is Testing Effective?

---



---

**Figure 4-3: Corporate Attitudes on The Effectiveness of Drug Testing**  
Source: AMA Research, 1994

The conclusion from the AMA survey is that drug testing, while an effective deterrent against drug abuse, should not be used as a stand-alone drug program. The results of the AMA survey are summarized in the following quote:

The findings do provide a statistical case that education, training, counseling, and treatment have a measurable effect on drug use. Drug testing, where utilized, ought to be part of a comprehensive policy that includes these other, demonstrably successful initiatives. (AMA Survey, 1994)

## **2. Drug Testing in the Military**

All four branches of the military conduct random urinalysis testing as a primary means of detecting and deterring drug abuse. Many researchers point to the consistent historical reduction in DoD drug abuse rates as evidence that the military's drug testing policy is effective. Bray summarizes his conclusions regarding the urinalysis program in the following quote:

The substantial declines in drug use since the urinalysis testing program began in 1981 and beliefs of military personnel in its deterrent properties lend support to the conclusion that the program is an effective strategy for preventing and reducing drug use (Bray et al., 1992).

The effectiveness of deterrence to which Bray is referring appears to be linked to four basic conditions:

- Randomness of the drug test (using a constant model)
- A clear statement of consequence (for drug abuse)
- Command level implementation of the program
- Reliability/believability of the drug test

**a. Randomness of the Drug Test (Using Constant Model)**

The randomness of drug testing is critical for a successful urinalysis program. The Navy has considered several testing models, the most noted being the Markov Chain (which uses an Age-Test Model).<sup>17</sup> However, NPRDC found that age-testing models can actually reduce effectiveness by significantly increasing the time to detection if the drug abuser is "gaming" the system (Boyle et al., 1993). Constant strategies are resistant to gaming since the probabilities of being tested remain the same regardless of past testing history. Most researchers believe gaming is an essential ingredient in a drug abuser's strategy to avoid detection.

A previous Navy drug abuser was interviewed and asked specifically about his beliefs concerning the Navy's drug testing program.<sup>18</sup> The abuser was never identified as a drug user during his enlistment in the Navy (in the mid-1980s) even though he was tested at least 12 times in five years. He recalls that most of his drug-using shipmates believed they could "beat the test." He said the key to his avoiding detection was a committed gaming strategy which involved:

- Having inside information (knowing someone who knew when the test would be administered).
- A thorough understanding of the drugs' effect on the body, including metabolic rates and body flushing procedures
- Careful planning to ensure the drug abuse occurred in a time-frame when a drug test was least likely to be administered

---

<sup>17</sup>For a full discussion of the Age-Test Model, see Boyle et al., *Markov Chains for Random Urinalysis (Series)*, Naval Personnel Research and Development Center, March 1993 and January 1994.

<sup>18</sup>Due to the sensitivity of the information, this interview was conducted on terms of anonymity. The person interviewed has been out of the Navy for over eight years and is no longer a drug abuser.

Clearly, an age-test model enhances an abusers' ability to "game" the urinalysis program. NPRDC has recognized this tendency to game the system and has therefore determined that the constant model is currently the most effective means of implementing an effective drug testing program.<sup>19</sup>

***b. A Clear Statement of Consequences***

The Department of Labor has found that a clear and comprehensive substance abuse policy, that explains the consequences for an employee found abusing drugs, is essential to any effective prevention program (Department of Labor, 1991). In NIDA's monograph series, entitled *Drugs in the Workplace: Research and Evaluation Data* (1990), Dr. Herbert Kleber (a noted leader in drug prevention research) states:

Surveys tell us that casual users...to a great extent are dissuaded by fear of being caught if there are very clear consequences once they are caught.

The Navy's "zero tolerance" policy has been in effect for about ten years, but the signal was mixed during most of this time. Whereas the more senior enlisted personnel and officers recognized that discovered drug abuse would result in an immediate job loss, the younger enlisted force saw "good potential" sailors allowed to continue to serve despite first incident drug abuse. In 1992, the Navy implemented a "true" zero tolerance policy which leaves no room to second-guess the real consequences of drug abuse in the Navy.

---

<sup>19</sup>The Navy plans on continuing a constant random testing model. This was confirmed during an interview with Dr. Jules Borack & Mr. James Boyle (NPRDC) by the author on 12 July 1994.

### *c. Command Level Implementation*

Tom Peters, the famous author and organizational management consultant, recently stated, "great execution still beats great strategy" (Peters, 1994). Regardless of how effective drug testing policy appears, if the strategy is not being fully implemented then the program will become ineffective as a deterrent. Consider the command that only tests once a month on the Wednesday following the mid-month payday. Though this complies with the mandated testing policy (10-20 percent each month), the effectiveness is questionable. Drug abusers can "game" the system and avoid detection. The Navy's *Urinalysis Handbook* (1992) explains how to effectively conduct the program. The handbook recommends testing several smaller quotas rather than one large monthly test. It also stresses timing of the drug test, as noted in the following excerpt:

The timing of a test can also be a factor in a successful urinalysis program. Test times should remain unpredictable to minimize the opportunities for "cheating" on the test and to maximize the deterrent effect. When to test can also be a creative decision...the point is to keep the testing schedule as unpredictable as possible. (Urinalysis Handbook, 1992)

The Navy has recently developed a computer-based Drug Policy Analysis System (DPAS) that can assist commanding officers in implementing an effective and efficient urinalysis testing plan. The system provides the user a statistical probability testing tool to ask "what if" type questions (e.g., "What if we test every third Monday at a 15 percent monthly rate?"). The program contains metabolic rates of various drugs and allows the operator to select many of the system parameters.



Two examples of how the DPAS system operates are illustrated below:

- **Example 1:** A drug abuser is using LSD approximately eight times per month and does not "game" the urinalysis program. The command tests at a 20 percent rate. DPAS reveals the average time to detection is sixteen months.
- **Example 2:** The same drug abuser, described in example (1), is "gaming" the urinalysis program. The command is still testing at a 20 percent rate. DPAS reveals the average time to detection increases to 25 months.

The Navy has also developed a Drug Information Presentation Model (DIPM). This computerized CD-ROM database system will be discussed further in the next chapter, but it can provide extremely useful information on each command's drug programs (including urinalysis testing). Inputs from several different information systems are utilized to create the DIPM database. The data is sorted by UIC and can be used to determine how each command in the Navy is implementing its drug testing program by revealing:

- The monthly rate at which a command is testing.
- What days (historically) the command has tested (and how often a particular day was chosen to conduct the test).
- How many "drug positives" a command has reported.
- The disposition of a drug positive individual (i.e., awaiting discharge or administratively separated).

Both effectiveness and efficiency can be enhanced through the power of the DPAS/DIPM systems. Twenty-one systems are being introduced at major commands and research sites worldwide (e.g., AIRPAC, CNET and NPS).<sup>20</sup>

---

<sup>20</sup>The DPAS and DIPM were both demonstrated to the author by Mr. Mark Chipman (NPRDC) at the Naval Postgraduate School, Monterey, CA, on 07 September 1994.

#### ***d. Reliability/Believability of the Drug Test***

For drug testing to be an effective deterrent, potential drug abusers must believe in the program's reliability to accurately detect when drugs have been used. Without this confidence, the deterrent effect is greatly reduced. Bray et al. concluded from the 1992 Worldwide survey that the urinalysis program appeared to be positively influencing potential drug abusers away from drugs. The survey revealed "drug users were nearly five times more likely than nonusers to report that urinalysis reduces the likelihood of their using drugs."

DoD and the Navy have implemented a careful quality control program (discussed in Chapter III) through AFIP with impressive results. However, only about 50 percent of the respondents to the 1992 Worldwide survey believe the testing is reliable. This 50 percent figure is actually an increase from the 1988 survey, which showed only a 41 percent reliability index. The Navy's Drug and Alcohol Program Division (Pers-63) is in the process of addressing the "reliability questions" with a soon-to-be released video entitled "*Without a Doubt.*" The film focuses on the reliability of the Navy's urinalysis program, describing the rigorous procedures with which the samples are screened, including the quality control programs. Pers-63 describes the purpose of the film as a way to educate Navy personnel on the reliability of the drug testing program to enhance its deterrent effect (Interview Mahan & Cook, 1994). The film will be released throughout the fleet (probably through the DAPA's) sometime during FY-95.

The reliability/believability factor is one area where the Navy can make considerable gains in effectiveness at a relatively low cost. If Navy

personnel can be educated on the scientific procedures and reliability of the test, one would expect the deterrent factor to increase.<sup>21</sup>

### **C. STUDIES ON THE MOST EFFECTIVE PREVENTION MODELS**

There are abundant strategies that have been proposed to prevent drug abuse. Most of the prevention models have evolved from different etiological assumptions concerning drug abuse and various theories of what causes behavioral change in an individual. The common theme in much of the literature suggests there is not a single "best prevention model" that is effective in every situation. The human psyche and personality differences are much too complicated for such a simplistic answer. There have been several attempts to organize the diverse prevention strategies into specific categories. Tobler (1986) has organized prevention programs by intervention modality. His five categories include:

1. Programs providing only drug information.
2. Programs altering the affective (i.e., emotional) psychological status of the potential user.
3. Programs that modify the potential user's relationship with and susceptibility to peers.
4. Programs that combine elements of (1) and (2).
5. Programs that offer potential users alternatives to drug use.

---

<sup>21</sup>Reliability/believability can not make up for poor implementation. If the drug testing program is being successfully gamed, then personnel will continue to have doubts about the ability of drug testing to catch known abusers. In surveys, this may be reported as doubts about the test's reliability.

Most studies support the conclusion that no single intervention model consistently prevents substance abuse.<sup>22</sup> However, a strong consensus is beginning to form suggesting a multiple modality approach is the best method for an effective prevention model.<sup>23</sup> A single modality approach has, at best, a limited impact on reducing drug use (Moskowitz, 1989 & Tobler, 1986). Tobler (1986) concludes through his quantitative research that the most effective prevention models are those which influence personal relationships with peers, especially in younger age groups.

Botvin (Botvin & Tortu, 1988), has reported evidence of success with a "Life Skills Training" program. The approach is targeted toward youth but the same principles also apply toward older potential. As described in *Drug Abuse Research III* (1991), submitted to Congress by The Department of Health and Human Services;

Participants learn the effects of substance abuse and develop cognitive-behavioral strategies for coping with anxiety, communicating with peers...enhancing one's self-image, and resisting peer pressure to use drugs.

*Drug Abuse Research* also finds that effective prevention programs "increasingly emphasize the development of interpersonal skills, enhanced self-perception, and the ability to resist peer pressure." (Drug Research, 1991). However, the narrative warns that the prevention field is still relatively new and a decade (or more) of evaluation using "precise, field based methodologies" may be required before final conclusions can be reached concerning the consistently most effective approach to drug abuse prevention.

---

<sup>22</sup>see Hawkins et al., 1985, 1987; Klitzner, 1987; Mauss et al. 1988; Moskowitz, 1989; Tobler, 1986.

<sup>23</sup>ibid.

## 1. The Cognitive Style Approach

A cognitive approach to drug abuse prevention involves creating an environment where individuals are encouraged to develop new methods and mechanisms for problem solving, decision making and coping. The goal is behavioral change of an undesired action (e.g., drug abuse). The approach is fundamentally an awareness model where participants are challenged to question their actions and motives by asking, "Why do I do the things I do?"

The Navy sponsored a research project (published in 1992) that investigated the cognitive style approach as it applied to alcohol and work-related problems of Navy personnel.<sup>24</sup> The study consisted of a random sample of 2,000 junior active duty Navy enlisted personnel.<sup>25</sup> The research findings support prevention strategies incorporating the cognitive style approach (i.e., strategies that incorporate problem solving, decision making, and coping skills), especially with young sailors who have displayed identity diffusion.<sup>26</sup>

## D. THE PREVENT MODEL

PREVENT uses a multiple modality, Cognitive/Lifestyle and peer intervention approach, which Tobler (1986), Botvin (1988), and Jones et al. (1992) indicate shows the most promise of effective intervention for substance abuse. The PREVENT model is geared toward the host of high-risk behaviors

---

<sup>24</sup>For more information on the study, see Jones, R.M., Ross, C.N., & Hartmann, B.R., *An Investigation of Cognitive Style and Alcohol/Work-Related Problems among Naval Personnel*, published in The Journal of Drug Education, Vol 22, #3, 1992.

<sup>25</sup>Final response rate was approximately 900 sailors.

<sup>26</sup>Identity diffusion is characterized by no attachment, no meaningful exploration or experimentation, and lacking commitment or identity (Marcia, 1983).

described in Chapter III. Educational aspects of PREVENT also exist (e.g., knowledge of personal BAC levels and a segment on the Navy's core values).

### **1. Direct Observational Analysis**

The thesis author attended the week-long PREVENT course in San Diego, California during July 1994. The instructor and PREVENT administrators knew the purpose of the author's attendance (to gain insight into the PREVENT program as part of this thesis research), but the other class participants were unaware of the author's background. Since 80 percent of the PREVENT attendees take the course as a pure prevention measure, the "stigma" of going to a course because of an identified problem is greatly reduced. Class participants are unaware if the other members have been referred for an incident or are filling a command-directed quota.

The observational analysis in this study will first consider four positive factors which appear to increase PREVENT'S effectiveness. Four negative elements, which reduce program effectiveness, will then be discussed.

#### ***a. Positive Factors of PREVENT'S Effectiveness***

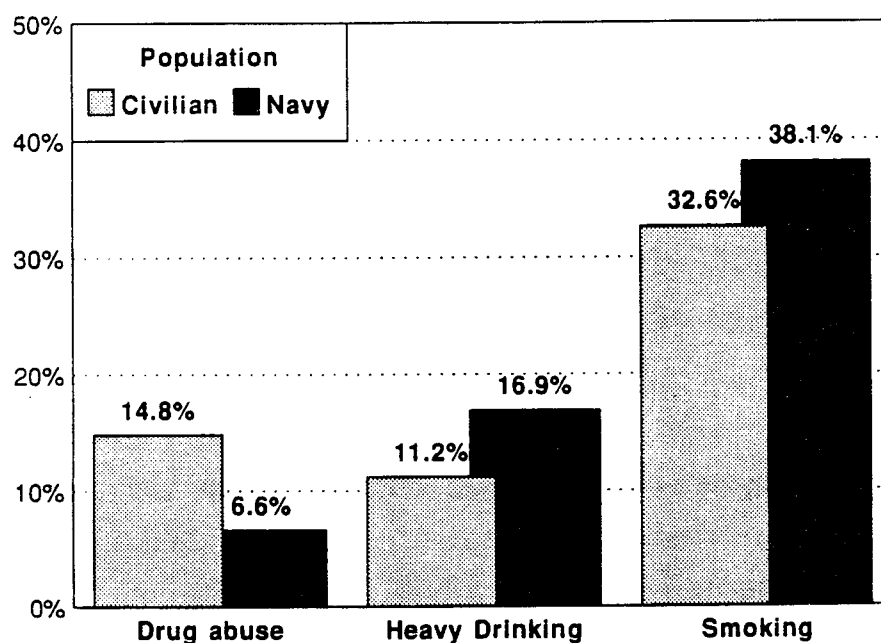
The four positive factors of PREVENT's effectiveness include:

- Addressing multiple high risk addictive behaviors
- Group setting
- Course length
- Mobility

(1) Multiple High-Risk Addictive Behaviors. The complexity of the human personality makes influencing a single negative behavior (e.g., drug abuse) extremely difficult. Studies show that if individuals are substance

abusers, they are also more likely to be depressed, suicidal, and have other serious interpersonal problems (Adams & Overholser, 1988).<sup>27</sup> By addressing the root problems rather than just the symptoms, PREVENT is able to create an "overlap" phenomenon of effectiveness. In other words, challenging a person's belief structure for one high-risk behavior can also positively affect the same individual's behavior toward a number of other negative characteristics.

The overlap phenomenon also helps prevent the problem of substituting from one high risk behavior to another (e.g., substituting alcohol abuse for drug abuse). It appears that some forms of substituting behaviors are occurring in the Navy. Figure 4-4 compares the civilian population with the Navy (age 18-25). Note that while the civilian sector shows higher drug abuse percentages, the Navy has a statistically significantly higher level of both heavy drinking and smoking.



**Figure 4-4: Civilian and Navy Comparisons of Substance Abuse**

Source: 1992 Worldwide Survey

Note: Standardized Substance Abuse Comparisons For 18-25 Year Olds (past 30 days use)

<sup>27</sup>The study also found that alcohol and drug abuse occurred more frequently in suicidal patients by as much as 12 times the general population.

During the PREVENT course, a young E-3 revealed that he was attending the class due to a recent suicide attempt.<sup>28</sup> During some of the "self-evaluation" and "believability" exercises, it became apparent that the E-3 also engaged in several other "high-risk" behaviors, including drinking excessively, smoking, and unprotected sex. The E-3 was in the process of being discharged and had just experienced a severe personal crisis. Though this case happens to illustrate a number of issues the PREVENT program addresses, the example is not considered unique. The point is that drug abusers also have other problems that must be addressed in a holistic fashion, not segmented into a one-day "Drug Avoidance Program" followed a month later by a "Tobacco Cessation Class" or an "Alcohol Responsibility Workshop."

Human behavior is a complex integration of values, beliefs, and attitudes; it does not fragment into such easily discernible pieces.

Due to the illegal nature and severe consequences of drug abuse, PREVENT participants rarely admit or discuss drug use. However, the decision making and resistance to addictive practice techniques taught by the course directly correlate to the behavioral tendencies associated with drug abuse. Many participants changed their attitudes toward several high-risk, negative behaviors during the course.

(2) The Group Setting. PREVENT's group setting appears to be especially effective. Throughout the course, group members would challenge, identify, and educate each other on various issues ranging from addictive personality behaviors (e.g., drinking and nutrition) to stress reduction and communication skills (e.g., how to get along with the boss). By including a larger percentage of personnel who are not attending the class due to "an incident," the classroom "norm" for behavior is at a higher plane (as compared

---

<sup>28</sup>Some minor descriptive details of this individual have been altered to provide anonymity.



to a group of all incident-related personnel). In fact, some of the most meaningful discussion times occurred during the class breaks. The synergy created by the group setting creates an atmosphere of positive lifestyle changing decisions.

(3) The Course Length. With tight resources and the Navy's continual search to reduce training time, this may not be a popular item, but it appears that the week-long course adds significantly to PREVENT's effectiveness. To adequately impact behavioral change, participants must be willing to challenge themselves and face issues that have been forming in their belief system most of their life. The group setting becomes most effective starting about the third day of class. It takes time for honesty and trust to develop between the PREVENT facilitator and the other class members. Additionally, the amount of information covered requires sufficient time to comprehend and incorporate into one's internal belief structure. Shortening the course will reduce the "Cognitive/Lifestyle" impact and step back into the single modality approach that Tobler (1986) and others described as the least effective form of prevention.

(4) Mobility of PREVENT. PREVENT has literally been taught around the world. Course facilitators have even deployed aboard naval vessels to teach the class. The instructor of the PREVENT class this author attended had just returned from a WESTPAC cruise where the course was offered over fifteen times to almost every junior enlisted sailor on the ship. With the Navy's operational tempo, it is critical for the PREVENT program to be a mobile course. An additional "overlap" of effectiveness is created as young sailors on an extended deployment and away from home for the first time are taught skills of resisting "high-risk behavior" (almost a definition of "liberty-call" during a ship's port visit).

***b. Negative Factors of PREVENT's Effectiveness***

The four negative factors of PREVENT's effectiveness include:

- Funding
- Lack of Class segregation (Officer/Enlisted)
- Facilitator contractual considerations
- Ignoring personal financial issues

(1) Funding of PREVENT. Most of the discussion concerning PREVENT funding will occur in the next Chapter as an efficiency issue; however, the effectiveness of the course is also negatively affected. The average \$3.5 million PREVENT contract is not fixed. The annual budget fluctuates throughout the year depending on the number of classes major claimant commands request. Additionally, the counterdrug funds from N-515 may not be distributed until midway through the fiscal year (depending on other requirements). Funding for the program actually comes from many sources. This fragmented and variable funding makes program planning extremely difficult. The results can decrease effectiveness through loss of courses and facilitators (as evidenced by the FY-94 cut of one million dollars).

As funding becomes increasingly constrained, PREVENT enrollment also drops. PREVENT attendance reached an all-time low during FY-94 (approximately 35,000 graduates). Resources also reached a new low, falling below the projected \$3.3 million mark to approximately \$2.8 million.

Questions regarding the cut usually point to the massive reductions DoD received during FY-94 in counterdrug budgets and the Navy's resulting share of the reduction.<sup>29</sup>

(2) Lack of Segregation (Officer/Enlisted). Though PREVENT can be tailored for segregated groups, the standard course includes all ranks and rates. The effectiveness of the course is reduced primarily because of the rank and chain of command barriers, which run contrary to the desired model of peer intervention and self-revealing openness. This has not been a historical problem, since only about two percent of PREVENT attendees are officers. However, it appears that combining division officers with their enlisted troops to openly discuss addictive practices and behaviors (from depression and drinking to high-risk sexual activity) constrains the openness that an effective group setting requires.

(3) Facilitator Contractual Considerations. The PREVENT instructors are part-time employees under contract from the University of Arizona. The employee pay scale is an hourly wage ranging from approximately \$9 to \$14 dollars an hour. A college degree is not required, though many facilitators have at least some advanced education or training. The part-time status means that no benefits (such as health insurance) are tied to the job, and the facilitator's income fluctuates as PREVENT funds are reduced (e.g., if a class is canceled, the facilitator is not paid).

---

<sup>29</sup>These budget discussions occurred at three levels within DoD during personal interviews by the author with representatives from each department (see *Interviews* in reference):

- OSD Department of Defense Drug Enforcement Policy & Support
- (USDP/DEP&S-DR) DCNO (Plans, Policy, & Operations) Counterdrug Branch (N-515)
- Bureau of Naval Personnel: Navy Drug & Alcohol Program (Pers-63)

The facilitator who instructed the class was outstanding. But it was also obvious he could not work a "part-time" job five days a week as a PREVENT facilitator and still support a family. Consequently, this talented counselor resigned shortly after the July class to take a full-time position with another counseling program. Though this is an isolated incident, it reveals a weakness in the contract. Specific educational and benefit requirements (including the possibility for full-time positions) should be established in the contract to ensure that high-quality facilitators are maintained. These requirements may cost more, but the facilitators play the key role in the courses' success and their expertise must be preserved.

(4) PREVENT and Personal Finances. PREVENT ignores the personal financial management issues that are a part of a personal responsibility paradigm. A segment dealing with the personal responsibility of meeting financial obligations and avoiding oppressive debt is a very real need in the fleet (especially when the spending is addictive in nature) . If commanding officers were asked to itemize those areas that daily provide the greatest challenge to their junior enlisted personnel, it would probably be the lack of personal finance skills and the constant indebtedness junior personnel face.<sup>30</sup> Though the argument could be made that personal finance has little to do with a PREVENT curriculum, an equally convincing debate could be waged showing a correlation between poor personal responsibility skills and severe financial problems. Though beyond the scope of this study, it would be interesting to note how many personnel being discharged for drug abuse and other high risk behavioral problems also suffer from poor personal financial management. The financial

---

<sup>30</sup> Although this is a subjective statement, the author confirmed this problem during several interviews. In discussing this issue with the PREVENT director (Dr. Hartmann), she confirmed that the Chief of Chaplains and several Commanding Officers had echoed the same concern.

theme would fit nicely into the overall PREVENT model of decision making by again emphasizing responsibility for one's choices.<sup>31</sup>

## **2. The Effectiveness of PREVENT**

The question for the Navy has become, "Is PREVENT an effective means of drug abuse prevention?" The contractor for PREVENT has been tracking the program's effectiveness for over eight years (before PREVENT, statistics were maintained on the NADSAP program). Chapter III briefly discussed the contractor's method of measuring effectiveness through pre and post questionnaires and follow-up surveys of graduates. The evaluation also involves randomly selecting Navy personnel who have not attended PREVENT and measuring their high-risk behaviors through surveys.

The published results of these measures of effectiveness are impressive. Consider the following program outcomes (PREVENT Information Guide, 1994):

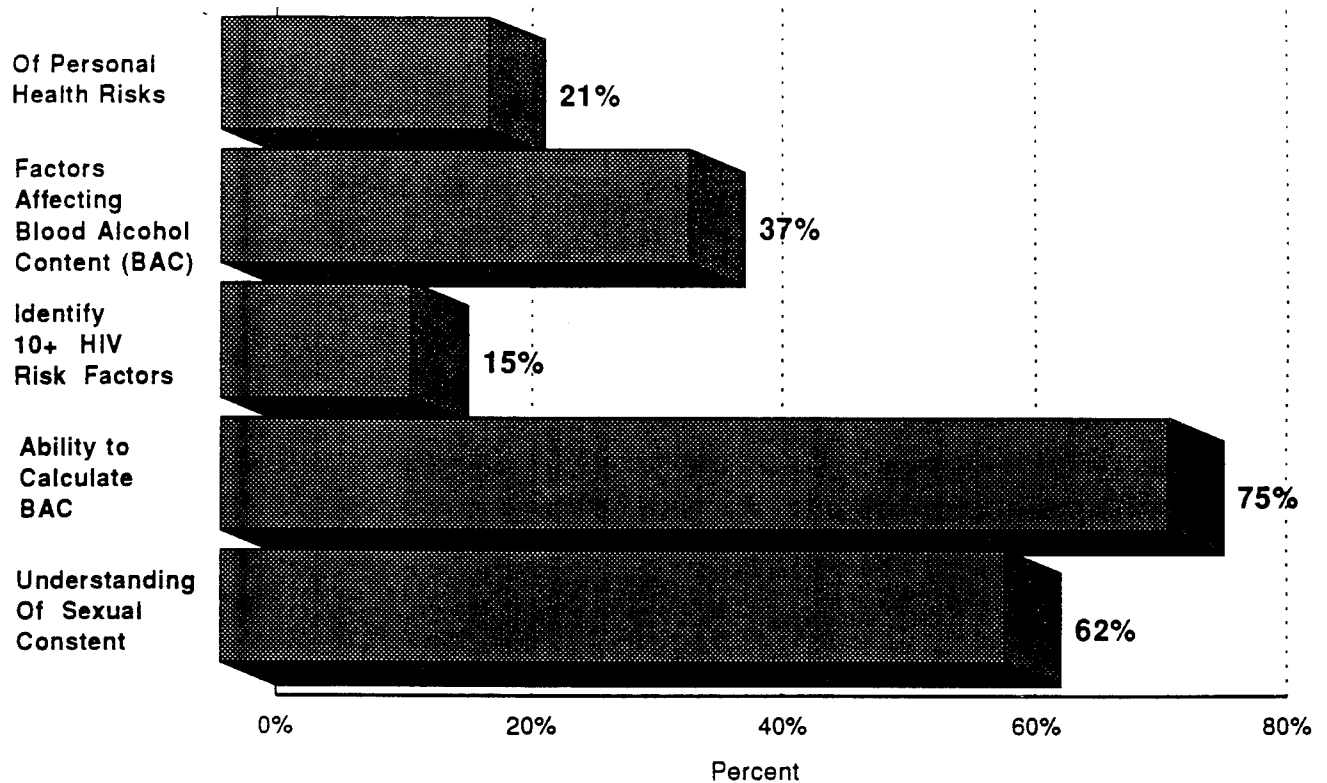
- Approximately 80 percent of the course participants report using alcohol. Within ninety days of completing the course, 40 percent of the graduates had decreased their alcohol use. This decrease in use was maintained over the year following course completion.
- Course graduates are less than half as likely to have a substance abuse related incident when compared to other service members.
- Supervisors report significant and consistently higher performance ratings among personnel who complete the course.
- Drug related incidents decreased from 3 percent to less than 1 percent and disciplinary actions were reduced from 7 percent to less than 3 percent.

---

<sup>31</sup> Properly handling one's finances is becoming more important for military personnel. The 1992 Worldwide survey contained a new section entitled "Gambling in the Military." The Navy displayed the greatest prevalence toward serious gambling problems (as compared to the other Services).

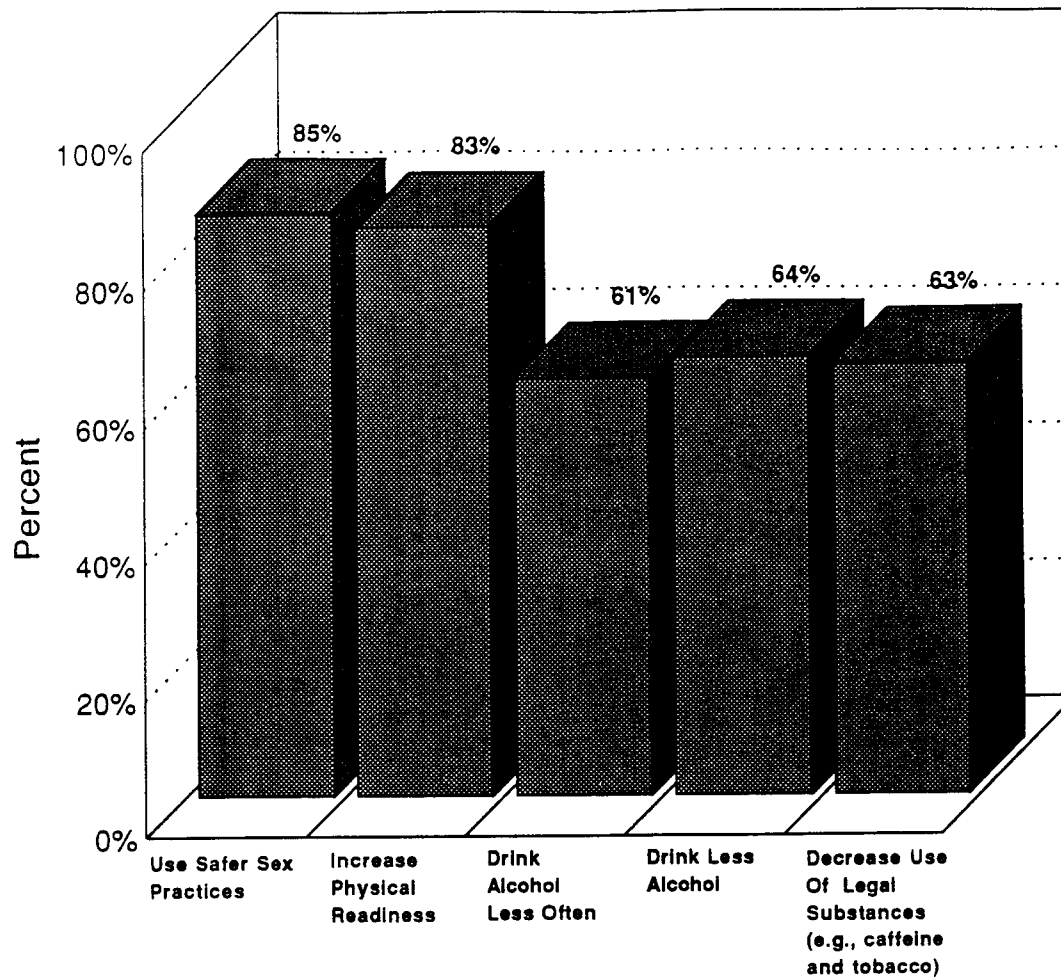
- Service members report that the application of the adaptability skills and problem solving strategies has enhanced their military readiness and overall quality of life.

Results from the pre and post test taken by the class attendees are summarized in Figures 4-5 and 4-6:



**Figure 4-5: PREVENT Graduates' Increased Awareness**

Source: PREVENT Fact Sheet, 1993



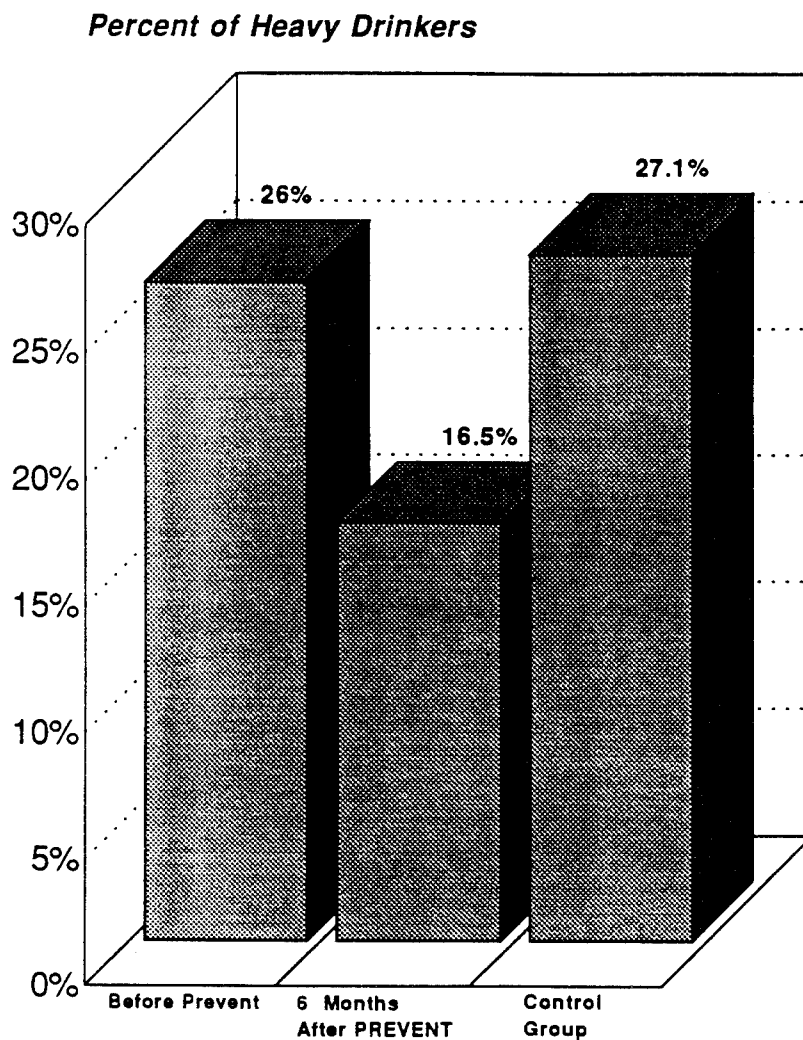
**Figure 4-6: PREVENT Graduates' Planned Changes**

Source: PREVENT Fact Sheet, 1993

Figure 4-7 compares PREVENT graduates to Navy personnel who have not attended the course. Though the substance being measured is alcohol, the same type of addictive, high-risk behavior is strongly associated with drug abuse. "Heavy drinkers" are defined as people who drink on at least one occasion a week, and have five or more drinks per occasion (Worldwide Survey, 1992).

### PREVENT versus Non-PREVENT

---

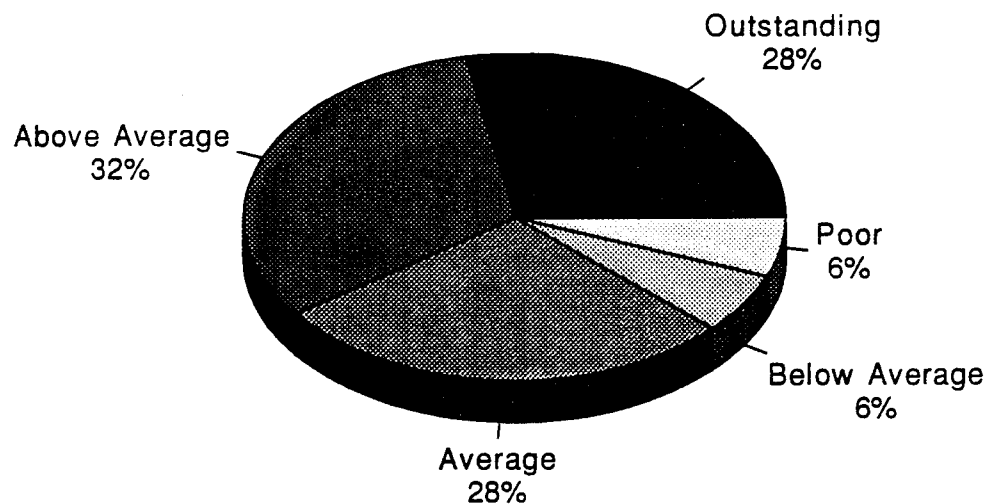


**Figure 4-7: Comparing PREVENT and Non-PREVENT Attendees**

Source: PREVENT Fact Sheet, 1993



Figure 4-8 displays what PREVENT students think about the course. Over the past two years, 60 percent of the graduates rated the course as outstanding or above average. This statement alone is impressive considering that the primary course objective is to change fundamental attitudes and behaviors of class participants, many of whom had a negative attitude toward attending the course (whether forced to attend through a substance abuse incident or directed from a command quota perspective).



**Figure 4-8: PREVENT Graduates' Impressions**

Source: PREVENT Information Guide, 1994

## E. DRUG ABUSE PREVENTION IN THE U.S. AIR FORCE (USAF)

Drug abuse within the Air Force has historically been lower than the other military services. Table 4-3 shows the unadjusted DoD rates of drug abuse over the past decade for each Service.<sup>32</sup> Figure 4-8, on the next page, graphically illustrates the USN/USAF comparison (using the "Past 30 Days" data).

YEAR	USN Past 30 Days (Percent)	USN Past 12 Months (Percent)	USAF Past 30 Days (Percent)	USAF Past 12 Months (Percent)	USA Past 30 Days (Percent)	USA Past 12 Months (Percent)	USMC Past 30 Days (Percent)	USMC Past 12 Months (Percent)
1980	33.7	43.2	14.5	23.4	30.7	39.4	37.7	48.0
1982	16.2	28.1	11.9	16.4	26.2	32.4	20.6	29.9
1985	10.3	15.9	4.5	7.2	11.5	16.6	9.9	14.7
1988	5.4	11.3	2.1	3.8	6.9	11.8	4.0	7.8
1992	4.0	6.6	1.2	2.3	3.9	7.7	5.6	10.7

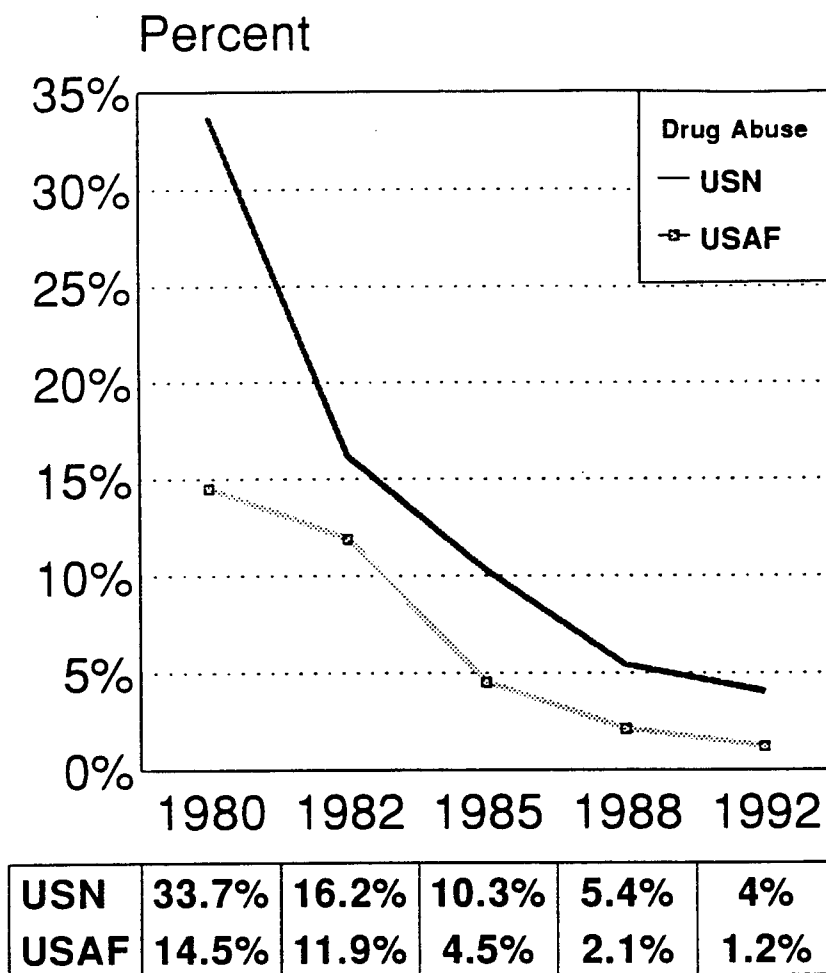
**Table 4-3: DoD Historical Drug Abuse Trends (Past 30 Days/Past 12 Months)**  
Source: 1992 Worldwide Survey

---

<sup>32</sup>Unadjusted estimates are sometimes referred to as "raw" estimates. They do not take into account sociodemographic differences between the Services. Unadjusted rates do not allow for strict comparisons between the Services.

## USN versus USAF HISTORICAL DRUG ABUSE

(Any Drug Use in the Past 30 days)

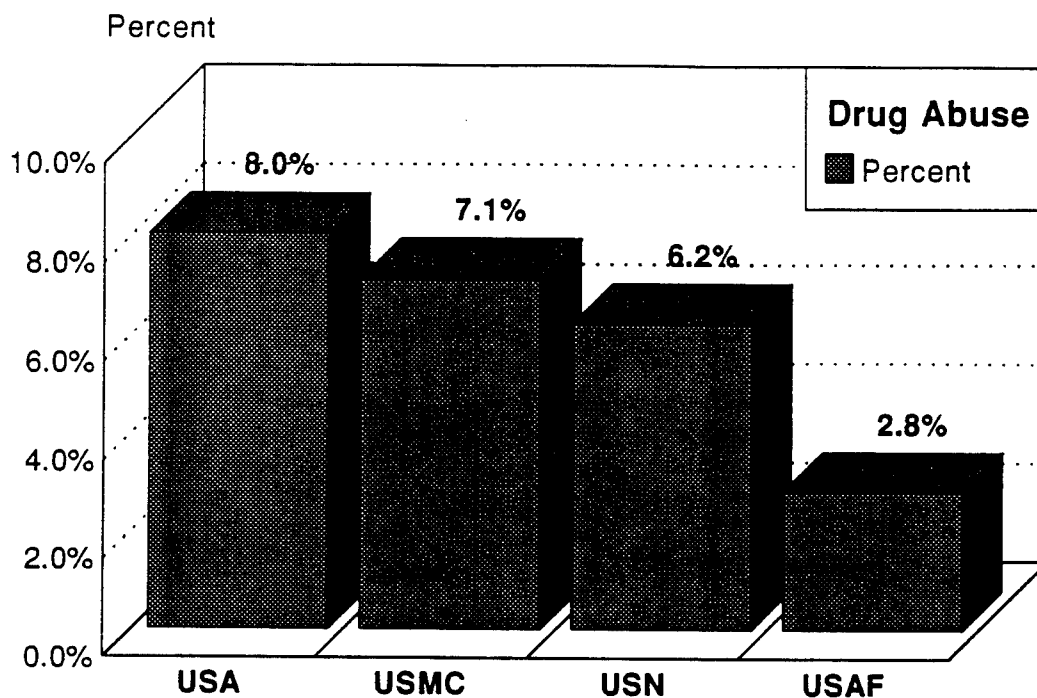


**Figure 4-9: USN versus USAF Historical Rate of Drug Abuse**

Source: 1992 Worldwide Survey

Even after adjusting for sociodemographic differences such as age, race, education, and marital status, the Air Force has a statistically significantly lower rate of drug use than the other military components. Figure 4-9 illustrates the adjusted rates for each Service.<sup>33</sup>

### Drug Use During the Past 12 Months (1992) (Adjusted for Sociodemographics)



**Figure 4-10: Service Comparison of Drug Abuse (Adjusted)**

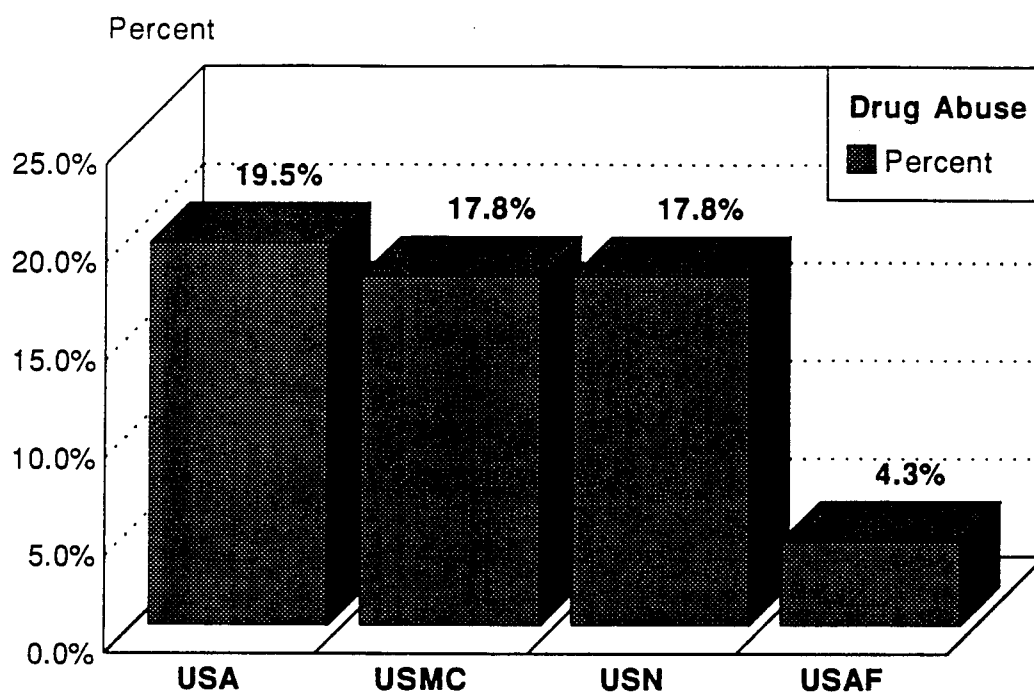
Source: 1992 Worldwide Survey

<sup>33</sup> Adjusted rates take into account the sociodemographic differences between the military services. Using regression-based standardized procedures, the adjusted rates allow comparisons between Services. The adjusted rate reveals the drug use prevalence that would be expected if each Service had the same DoD distribution profile (concerning sex, age, education, race/ethnicity, and marital status).

The most recent Worldwide Survey (1992) makes special note of the "striking difference" in drug abuse in the lower pay grades (E1-E3) between the Air Force and the other Services. Figure 4-10 depicts the adjusted rates for the younger enlisted military members (typically the highest drug abusers) for each Service.

### **E1-E3 Drug Use During the Past 12 Months (1992)** (Adjusted for Sociodemographics)

---



**Figure 4-11: Service Comparison of E1-E3 Drug Abusers (Adjusted)**

Source: 1992 Worldwide Survey

## 1. Effective Elements to Drug Prevention in the USAF

Looking at statistics alone reveals something is very different in the USAF as compared to the other Services. If one definition of effectiveness is "lower abuse rates," then the question becomes: "how has the Air Force maintained a more effective level of drug abuse prevention than the other DoD military components?" This is especially perplexing when one considers that the Air Force historically has only conducted random urinalysis testing at an annual rate of 30 percent.<sup>34</sup> This is the lowest rate of any Service (the Army, Navy, and USMC all test at a rate above 100 percent).<sup>35</sup> Through various interviews, research, and analysis, this thesis benchmarks four keys which appear to influence the lower rate of drug abuse in the Air Force.

- Historically tighter drug abuse policy
- Quality of recruit/psychological profile
- Proactive law enforcement
- Quality of life

### *a. Historically Tighter Drug Abuse Policy*

In a recent interview with the Air Force department responsible for demand reduction policies (Darby & Herdman, 1994), the tighter USAF drug abuse policy was discussed as a key factor for lower Air Force abuse rates.<sup>36</sup>

---

<sup>34</sup>For a thorough analysis of the Air Force drug testing program, see Doster & Ross, *An Analysis of the Effectiveness of the Air Force Drug Testing Program and Four Potential Modifications*, {Thesis}, Air Force Institute of Technology, Wright-Patterson Air Force Base, OH, 1993.

<sup>35</sup>In mid 1992, the Air Force was directed to increase the annual percentage of its population randomly tested from 30 to 60 percent (Doster & Ross, 1993).

<sup>36</sup>The USAF separation policy was confirmed via phone call to Major Rich Cervetti, USAF, Air Force Enlisted Separations & Retirements Branch (DPXER), by the author, 24 October 1994.

Since the early 1980s, the USAF has discharged virtually all individuals identified as drug abusers (E-1 and above) for all drug use except marijuana. Those lower pay grades testing positive for THC could be retained in the Service in some special circumstances. However, a "true" zero tolerance policy was instituted by 1988, and essentially all USAF personnel (E-1 and above) found positive for any illegal drug (including THC) were immediately processed for separation. This was tighter than any other military services and four years before the Navy went to a "true" zero tolerance policy for all pay grades.

***b. Quality of Recruit/Psychological Profile***

The quality of the Air Force recruit and the psychological profile of USAF personnel are tied together as contributing factors to a lower USAF abuse rate. The Research Triangle Institute (RTI) reported in 1989 that both sociodemographic and psychological variables are important in explaining why individuals abuse drugs (Bray et al., 1989). The Air Force has the most restrictive entrance aptitude standards of any Service (Eitelberg, 1988), resulting in consistently higher enlisted ASVAB scores (as compared to the other Services).<sup>37</sup> DoD demographic surveys reveal that over 54 percent of the USAF enlisted personnel have some college credit toward an advanced degree, twice the level of any other Service (Selected Manpower Statistics, 1993). Air Force regulations also contain a policy prohibiting the enlistment or appointment of personnel who have ever used drugs (AFR 30-2, 1986).<sup>38</sup>

---

<sup>37</sup>The military uses the Armed Services Vocational Aptitude Battery (ASVAB) to assess the cognitive aptitude of enlisted personnel. For further reference, see *Adaptability Screening for the Armed Forces*, edited by Trent and Laurence, Office of Assistant Secretary of Defense (Force Management and Personnel), 1993.

<sup>38</sup>The specific regulation (AFR 30-2 C1 Chapter 3, para 17b) states that in some situations waivers may be requested.

Table 4-4 graphically illustrates the historical dominance of the Air Force "recruit quality" factor:

PERCENT WITH HIGH SCHOOL DIPLOMA	1991	1992	1993	1994	Average '83-'93
All Services	97	99	95	96	94
Army	98	100	95	95	93
Navy	96	98	94	95	92
Air Force	99	99	99	99	99
Marine Corps	98	99	97	95	96

PERCENT 'HIGH QUALITY' RECRUITS <sup>1</sup>	1991	1992	1993	1994	Average '83-'93
All Services	72	74	67	68	61
Army	78	78	66	66	59
Navy	62	66	64	63	55
Air Force	85	85	79	80	77
Marine Corps	67	70	66	68	61

PERCENT CATEGORY IV RECRUITS <sup>2</sup>	1991	1992	1993	1994	Average '83-'93
All Services	0.5	0.2	0.8	0.7	4.8
Army	0.9	0.4	2.2	1.9	5.7
Navy	0.4	0.0	0.0	0.0	7.1
Air Force	0.1	0.2	0.2	0.1	0.7
Marine Corps	0.1	0.0	0.0	0.0	2.0

<sup>1</sup> High quality recruits have high school diplomas or the equivalent and scored in the top 50 percentiles on the Armed Forces Qualification Test (AFQT).

<sup>2</sup> Category IV recruits scored between the 10th and 30th percentiles on the AFQT. Those scoring below the 10th percentile are not eligible for service.

**Table 4-4: Recruit Quality Measures (in Percent)**

Source: Reported in Navy Times per DoD, 14 November 1994



Perhaps the most important factor in the quality debate is the psychological difference of the recruits that complete initial basic training. In the mid 1970s, the Air Force began a highly successful psychological evaluation procedure known as the Air Force Medical Evaluation Test (AFMET). AFMET uses a psychological screening process to administratively separate USAF recruits likely to attrite (Fielder, 1990). Idar and Scaramozzino (1992) describe the process as a three-phased model that uses self-reports of life history, a standardized mental health inventory, and a mental health evaluation by a psychologist or psychiatrist (in the final phase).

As discussed in the previous Chapter, the Navy began a program in 1991, modeled after the USAF program, called the Navy-AFMET (N-AFMET). The Navy's early findings reveal the N-AFMET program has provided a "very positive effect" resulting in a "significant decrease in attrition" (Idar & Scaramozzino, 1992). Interestingly enough, a significant proportion (36%) of those attrited in the N-AFMET screening process were diagnosed with some variation of alcohol or drug related diagnosis. Neither the Army nor Marine Corp use this type of screening process. By identifying and screening out new recruits with adverse psychological problems, the Air Force has been able to ensure a higher quality recruit who is less likely to abuse drugs.<sup>39</sup>

One potential consequence of the Air Force screening process is a recruit with a different psychological belief system. Hildebrandt found evidence that the psychological belief system of the USAF member may in fact be different than the other Services, and the Navy in particular (Hildebrandt, 1994). She discovered, through logit analysis of the 1992 Worldwide Survey, that USAF personnel are "significantly more likely to believe in the harmful

---

<sup>39</sup>The 1992 Worldwide survey compensates for educational level differences between the Services in its "adjusted" percentages. This helps to explain the USAF rise in abuse rates when the sociodemographic adjustment is made. However, the AFMET screening process is not accounted for in the survey adjusted figures.

effects of drugs." In the 1989 RTI study referred to earlier (Bray et al.), the results indicate that belief in the harmful effect of drugs is an important predictor of drug abuse. By recruiting a higher quality individual and using an active recruit screening process, the Air Force may get young people with a different psychological profile than the other Services. This difference probably plays an important role in the Air Force's lower abuse rates.

***c. Proactive Law Enforcement***

The Air Force has a strong, proactive law enforcement organization called the Air Force Office of Special Investigations (AFOSI).<sup>40</sup> Created in 1948, AFOSI is comparable in scope and mission to the Naval Criminal Investigative Service (NCIS). However, NCIS agents are civilian federal investigators who are employed by the Navy (similar to FBI or Secret Service agents).<sup>41</sup> Approximately two-thirds of AFOSI's agents are active duty or reserve USAF personnel. There are several advantages to using military personnel, especially when undercover operations are being conducted. Agents with military backgrounds or expertise can easily merge into a command climate suspected of having a drug problem. With its military units, AFOSI conducts two highly effective programs in its internal fight against drugs, the Source Program and the Undercover Agent Program.

---

<sup>40</sup>Significant portions of this section are based on a personal interview with Special Agent, Captain James L. Weingartner, USAF/OSI by the author on 14 & 28 October 1994.

<sup>41</sup>Phone interview with Mr. Joe Orrigo, NCIS, Head, Counterdrug/Special Operations and Criminal Intelligence (Code 0023BN) by the author on 03 November 1994. Mr. Orrigo confirmed that all NCIS counterdrug special agents are civilian.

(1) The Source Program. When an individual tests positive for drug abuse through a routine urinalysis test, AFOSI is notified immediately---often before the command or individual. AFOSI is given the opportunity to contact the drug abuser and determine if they are willing to help identify the drug supplier and other drug abusers. Sometimes an undercover operation will be initiated with the aid of the source. The source program has reaped significant benefits. In one publicized operation (Global Reliance, Mar/Apr 1991), a young airman was stopped by local police while driving a marked government vehicle in an area known as an operating district for crack cocaine dealers. Since the vehicle did not have any official business in the area, the airman was required to participate in a command directed urinalysis, which proved to be positive for cocaine. The airman was brought into the source program, and two confidential informants were used to begin a three-month undercover investigation. The operation resulted in the arrest of 12 mid-level cocaine dealers. A secondary case was generated that resulted in the arrest of an additional five dealers.

(2) The Undercover Agent Program. When civilian drug dealers sell drugs to military members or distribute them to military installations, current DoD directives allow military investigative agencies to conduct undercover narcotics operations (Global Reliance, Mar/Apr 1991).

Working with local police departments, AFOSI aggressively attacks the drug problem at the off-base supply points. In a seven-month undercover operation in Tacoma, Washington, AFOSI and local law enforcement officials arrested 40 drug dealers, some of whom were identified as gang members. Attacking the local supply roots makes dealing with Air Force personnel very risky. In the Tacoma case, the local drug district was characterized by law enforcement personnel as a "ghost town." The distributors had become extremely cautious in selling drugs to USAF personnel.

Undercover operations are also aggressively conducted internally within the Air Force command structure. AFOSI Special Agents will pose as legitimate command personnel or work through informants in a unit suspected of having a drug problem. The commander is usually working with the undercover agent, but his approval (or knowledge) is not required. A case at Malmstrom AFB, Montana illustrates how an AFOSI informant (a female sergeant) helped to uncover an airman who offered to buy cocaine for her (Global Reliance, Sep/Oct 1990).

In an overseas operation, local NCIS officials suspected a possible drug problem on a Navy base as a result of several positive urinalysis tests. NCIS did not have the manpower nor technical resources available for an undercover operation so AFOSI was asked for assistance. The Navy base commander was not convinced his command had a serious drug problem, but agreed to a weekend undercover operation with the stipulation that sailors attached to ships currently in port would not be targeted. AFOSI agents made over 15 drug related arrests in one weekend. Of special note, agents actually working the sting operation reported that many more arrests could have been made if the "no sell to the fleet sailors" rule had not been established (Interview with Weingartner, 1994).

Proactive use of military agents and informants to identify drug abusers and shut down local suppliers makes AFOSI unique. Fighting drug abuse has been a top priority of AFOSI for many years. Through their diligence, AFOSI has made drug abuse in the Air Force an exceptionally risky endeavor.

#### *d. Quality of Life*

Quality of life may play an important role when considering psychological factors of drug abuse. Bray and others have found that the relationship between drug {and alcohol} abuse and the military workplace is extremely complex (Bray et al., 1990). However, using regression analysis on the 1988 Worldwide survey, Bray's studies determined the following:

...certain {unfavorable} conditions of military life are related to greater involvement in use of drugs and alcohol. Work-related stress, region, and family status are significant predictors of both drug use and heavy drinking.

This assertion tends to support the hypothesis that those who sense a greater discontent with their present lifestyle are more likely to use drugs. While quality of life can be a difficult feature to quantify directly, associated factors can be used as substitute measures. One such measure is the reenlistment rates of enlisted personnel. Since each military service uses the same pay scale, and most DoD policy directives affect military personnel in approximately the same manner, reenlistment rates can provide a relatively strong indication of job satisfaction and the quality of life (based on a member's decision to remain on active duty). Table 4-5 reveals the Air Force consistently shows higher reenlistment rates than the other Services.

FY	USA (%)	USN (%)	USMC (%)	USAF (%)
1987	41.8	65.1	53.2	83.9
1988	47.1	63.9	50.7	92.0
1989	48.2	67.2	47.7	89.2
1990	28.7	68.0	54.7	77.6
1991	75.4	69.2	47.5	81.2
1992	69.5	69.6	43.8	82.8
1993	71.6	67.1	46.6	84.0

**Table 4-5: Reenlistment Rates (FY87-FY93)**

Source: DoD Selected Military Manpower Statistics, FY-93

Another factor affecting perceived quality of life is separation from families. The results of a 1992 survey released in August 1994 reported that Navy and Marine Corp families were separated more often than their counterparts in the other Services, with the Air Force spending the least time away from their families (DoD Survey, 1992). If quality of life decreases with an increase in stress, and one assumes that separation from families increases stress at work, then Hildebrandt's logit analysis becomes relevant. The analysis demonstrates that increased stress at work is a highly significant estimator of drug abuse (Hildebrandt, 1994). The DoD survey also showed that junior enlisted members (E1-E3) spent the most time away from their families. Since this lower pay grade group is also the most likely to abuse drugs, the influence of stress can produce a compounding effect.

In Bray's research on drugs in the workplace (Bray et al., 1990), two specific recommendations address the family support and stress issue:

- The military should examine its policies on spousal accompaniment to provide the stability of family support whenever practical.
- The military should evaluate the stress-producing conditions of certain military jobs and intensify its efforts toward helping military personnel effectively cope with stress by offering additional stress management instruction.

A final comment on the quality of life question is an observation made while gathering data for this thesis. This research entailed interviewing dozens of individuals from different branches of service and at various levels throughout DoD (many who are directly responsible for drug abuse policy and implementation). In many of the interviews, interviewees were asked what they felt was a major factor contributing to the Air Force lower drug abuse rates. In every instance where the question was asked, one of the responses included a statement that the Air Force provided a better "quality of life" for its enlisted personnel (compared with the other Services). Though this is a highly subjective measurement, it is interesting to note the uniformity of the responses.





## **V. MEASURING THE EFFICIENCY OF DRUG ABUSE PREVENTION**

This chapter focuses on the efficiency of the Navy's drug abuse prevention programs. Normally, economists view efficiency as a relationship between the value of the ends and the value of the means (Heyne, 1993). The concept of "marginalism" is important as marginal benefits and marginal costs are compared, often leading to today's well known evaluation technique known simply as "Benefit-Cost Analysis (BCA)." This thesis does not attempt to perform a BCA of drug abuse prevention; instead, efficiency is narrowly defined as it relates to the efficient process of providing resources (both monetary and personnel) to the Navy's drug prevention efforts.

The chapter begins by looking at drug abuse prevention program funding. Drug testing is briefly considered in reference to a current DoD initiative to consolidate the military drug testing laboratories. The PREVENT program's funding is then analyzed, particularly the efficiency elements of timeliness, adequacy and sources of funding. Other "wellness" type programs are mentioned with attention given to resource sponsorship, major claimancy, and program manager status. Drug prevention in community awareness programs is reviewed as it pertains to the Navy, with comments regarding how efficient DoD is in using its drug prevention resources. Lastly, manpower efficiency (and effectiveness) is assessed, particularly as it relates to the DAPA program.

### **A. DRUG ABUSE PREVENTION PROGRAM FUNDING**

All Navy and Marine Corps Counterdrug (CD) resources have been consolidated within DCNO (Plans, Policy, and Operations) Counterdrug Branch (N-515). As Table 5-1 reveals, the Navy's Demand Reduction budget line is relatively small when compared to the total Navy CD budget.

<i>DoN CounterDrug Budget Summary<sup>1</sup></i>	<i>FY-94</i>	<i>Totals</i>
Demand Reduction <sup>2</sup>		
Navy	27.7	
Marine Corps	3.7	
TOTAL:		31.4
Total CD Budget		
Navy	220.9	
Marine Corps	15.9	
TOTAL:		236.8

**Table 5-1: DoD Counterdrug Budget Summary (\$ Millions)**

Source: DCNO (N-515) Counterdrug Spreadsheet, 1994

- Notes: 1. Approximate budget lines as of July 1994  
2. Includes project lines (Navy) #8351/8352/8993 and (USMC) #8353/8354/8995

The Navy's Counterdrug Branch received an unanticipated reduction of approximately \$50 million in FY-94. This cut was spread-out among the various project lines. While it is difficult to account for how much of the reduction actually went to each resource sponsor, the CD branch did explain that drug testing and the urinalysis program was given the highest priority (i.e., other project lines were cut before drug testing). (Interview with Weisberg, 1994).

### **1. The Drug Testing Program**

Even though the urinalysis program is given the highest priority in resource funding, the Navy and DoD continue to search for ways to increase the efficiency of the program in order to save resources. The total cost of processing a urine specimen is approximately \$7 per sample (Interview with

Davis, 1994). In order to increase efficiency while reducing direct and indirect overhead costs associated with testing millions of samples each year, DoD is considering consolidating all of the military drug testing facilities.

***a. DoD Drug Lab Consolidation<sup>42</sup>***

In 1992 the DoD IG recommended that the military go from nine to four drug testing laboratories to increase cost efficiencies in the urinalysis program. DoD has directed the Services to enter into a three month joint pilot program at Tripler Army Medical Center (beginning in October 1994) to study the feasibility of consolidating the laboratories. If the military labs are consolidated, drug testing would be conducted on a regional basis. The tentative plan is to locate the labs at the following sites (the lead Service at each lab is highlighted in brackets):

- Brooks AFB, San Antonio Texas {USAF}
- Fort Meade, Maryland {USA}
- San Diego, CA {USN}
- Jacksonville, FL {USN}

The consolidation issue is sensitive within DoD. Several factors besides strict cost efficiencies are being debated, including:

- How many drugs will each sample be tested for?
- Will the Services continue to test at different rates or will they be regulated on how much/often to test?

---

<sup>42</sup>Much of the information in this section was obtained during an interview with LCDR George Davis, Branch Head, Detection & Deterrence (Pers-63), Washington D.C., by the author on 08 August 1994.

- Is contracted drug testing cheaper (with the same quality) as compared to testing in DoD labs?
- Will individual Services have the same accessibility to the consolidated or contracted labs?
- What policy will be used to determine when a sample is tested (concerning the damage and general condition of the sample when it arrives at the lab)?

Each of the Services vary somewhat in the specifics of how urinalysis samples are tested and the administration of the programs. The cost efficiencies and trade-offs that consolidated/contracted labs provide is an issue requiring greater study and evaluation.

## **2. The PREVENT Program**

The PREVENT resource sponsor is N-1 (via BUPERS). As explained in Chapter IV, the funds for the \$3.5 million PREVENT contract come from many different activities including:

- BUPERS 63
- DCNO (N-515) Drug Demand Reduction Office
- Major Claimants<sup>43</sup>
- Local Commands

---

<sup>43</sup>As an example of Major Claimant funding, CNET provided about \$400K in FY-94 to the PREVENT contract (Interview with Massengill, 1994).

The Drug and Alcohol Program Management Activity (DAPMA) controls the PREVENT funds, though the contract is actually administered by local Counseling and Assistance Centers (CAAC) (Pers-63 Point Paper, 1993).<sup>44</sup>

The inefficiencies involved in funding PREVENT are summarized in the following three areas:

- Multiple resource providers
- Flexible budget
- Drug prevention verses other "wellness" programs

Working together, these deficiencies create an inefficient allocation of resources which also decreases the effectiveness of the PREVENT program (as discussed in Chapter IV).

***a. Multiple Resource Providers***

As Pers-63 explains, "the Bureau of Naval Personnel does not have enough funds to accommodate the demand for PREVENT and {major} claimants and individual commands {must} augment the funding" (Pers-63 Point Paper, 1993).<sup>45</sup> The myriad funding possibilities reduces the efficiency of the PREVENT funding flow. When funding is short, the DAPMA must "shop" for a resource supplier, cut funds from another budget line, or cancel classes. The PREVENT contractor rarely knows from quarter to quarter what level of funding to expect or how many PREVENT classes to schedule.

---

<sup>44</sup>DAPMA is a support detachment from BUPERS 63 and is located in San Diego, CA. It was originally formed in 1985 as the NADSAP Management Office (NMO). DAPMA provides a central point as the "eyes and ears" for Level I and Level II programs. It manages the worldwide drug and alcohol related contracts. (Pers-63 point paper, 1993).

<sup>45</sup>Pers-63 reported the fleet demand for NADSAP/PREVENT reached a record high of 70,000 confirmed requests in FY-92 (Pers-63 Point Paper).

The adequacy and variability of funding is not a new problem to NADAP. Findings in a 1982 Navy audit report of the Navy and Marine Corps alcohol and drug abuse programs found:

The adequacy of funding and staffing varies {at the local counseling facilities}. No direct relationship exist between available resources and potential users...Funds are passed through major claimants to local commands and are difficult to trace to the CAAC activity level...CAACs and most NASAPs depend primarily on the priority assigned by the commanding officer for funding and staffing resources. (Naval Audit Service, 1982)

The PREVENT budget suffers from the same type of resource allocation problems that earlier drug and alcohol abuse programs faced.

***b. Flexible Budget***

The flexible budget problem is closely associated with having too many resource providers. Because PREVENT is not a fixed contract, the level of funding fluctuates with each quarter and the required class schedule cannot be fixed. For example, the PREVENT contractor is currently operating (as of 22 November 1994) on funding for the first quarter FY-95, but has not received funding information for the second quarter, scheduled to begin in just six weeks.<sup>46</sup> The contractor's obligations to both the Navy and the PREVENT employees (e.g., site coordinators and facilitators) are difficult to manage given the inefficient method by which funding is provided.

---

<sup>46</sup>Information provided the author after his phone request from the PREVENT contract director (Dr. B.R. Hartmann, Ph.D.), on 21 November 1994.

***c. Drug Prevention Verses Other "Wellness" Programs***

The PREVENT program addresses at least ten different high-risk/behavioral issues, with drug abuse being a relatively "minor" topic. However, the entire funding of PREVENT comes through the drug prevention budget line. Those responsible for the CD budget question the validity of funding a program which addresses so many other issues (besides drug abuse). Fragmented budgets in the "wellness" type programs (e.g., tobacco cessation, HIV/AIDS awareness, and sexual harassment education to name just a few), encourages infighting as to whose office should fund which programs. However, while budgets are fragmented, potential course attendees have complex personalities and overlapping behaviors. The multi-modality approach to high-risk behavior has been illustrated as the best form of drug prevention, but the Navy funds its "wellness" programs through fragmented budget lines including multiple resource sponsors and program managers. When consolidated courses like PREVENT are introduced, the fragmented budget process hinders efficient use of Navy resources. A consolidated budget, grouping all the "wellness" type programs together, should provide stability and a more efficient allocation of resources. Centralized program management responsibilities also help preclude redundant funding, creating additional efficiencies.

**(1) Zero-Based Training and Education Review (ZBT&ER).**

In 1993, the Navy completed a comprehensive Zero-Based Training and Education Review (ZBT&ER). The stated purpose of the review was:

...to examine Navy shore-based training and education...to ensure that the training infrastructure is appropriately sized and focused to support a smaller, more capable Navy and to ensure that Navy training and education will effectively employ the doctrine of ..."From the Sea." (ZBT&ER, 1993)

Table 5-2 illustrates how the ZBT&ER describes the sponsorship, claimancy, and management responsibilities of various wellness programs.

<i><b>Selected Training Programs (Wellness Oriented)</b></i>	<b>Resource Sponsor</b>	<b>Major Claimant</b>	<b>Program Manager</b>
<b>PREVENT</b>	N1	BUPERS	BUPERS
<b>DAPA</b>	N1	CNET/BUPERS	CNET/BUPERS
<b>HIV/AIDS</b>	BUMED	BUMED	CNET
<b>Victim Assistance Rape Awareness</b>	N1	BUPERS	BUPERS
<b>Financial Management</b>	N1	BUPERS	BUPERS
<b>Physical Readiness Smoking Cessation</b>	N1	CNET	CNET
<b>Standards of Conduct Ethics</b>	Office of General Council (OGC)	OGC	OGC
<b>General Military Training (Includes some "wellness" type training)</b>	N1, N09B	CNET/BUPERS	CNET/BUPERS

**Table 5-2: Sponsors and Claimancy of Various Wellness Type Programs**  
Source: ZBT&ER, 1993 and Pers-63

The ZBT&RE report discusses many of the programs in Table 5-2 within the context of its "leadership development program." It finds "considerable duplication of effort" across the programs, with only "limited measures of effectiveness" in place to evaluate the programs. The ZBT&ER



specifically discusses the NADAP programs, making the following recommendation and rationale/justification statements:

**RECOMMENDATION:** Designate CNO N7 as the single resource sponsor for all shore-based education and training.

**RATIONALE/JUSTIFICATION:**

Of the General Military Training (GMT) programs...N1 is the resource sponsor for...Drug and Alcohol Program Advisor (DAPA) training...CNET/BUPERS are the major claimants and program managers for DAPA training. Placing the resourcing and funding control for...the drug and alcohol programs in a single area will provide standardization and consistency in program content and delivery, provided appropriate funding is realized. Resourcing would be under the single official most responsible for supporting the programs, and management of funds and execution would be under subordinates to that official. It would also place the major claimant and program manager in a position to be the sole and total provider of standardized training aids to be used by local commands in conducting General Navy Training. (ZBT&ER, 1993)

Aligning the wellness programs under a single resource sponsor, who is also the major claimant and program manager, could provide a coordinated and more efficient management for all the programs.

### **3. Community Awareness Programs**

The federal government has sponsored drug prevention community awareness programs for a number of years. The Department of Education and the Department of Housing and Urban Development are two principle players in the government's efforts to help States reduce drug abuse. In 1993, congress specifically tasked DoD with developing pilot outreach programs to

help in the nation's drug demand reduction efforts. The conference report for the National Defense Authorization Act (FY-93) states:

The Secretary of Defense shall conduct a pilot outreach program to reduce the demand for illegal drugs. The program shall include outreach activities by the active and reserve components of the Armed Forces and shall focus primarily on youths in general and inner-city youths in particular. (House Conference Report, 1992)

The Department of the Navy responded with the Drug and Education For Youth (DEFY) program.

***a. The Drug Education For Youth (DEFY) Program<sup>47</sup>***

The DEFY program is just one of several community awareness programs the Department of Navy (DoN) sponsors through the Secretary of the Navy's Drug Demand Reduction Task Force (DDRTF).<sup>48</sup> It is highlighted here as an example of how Navy drug prevention resources are used in programs outside the military arena.

The DEFY program targets 9-12 year olds (typically inner-city youth) and provides education, skill-building and other positive work related experiences. Its stated goal is to "enhance drug resistance, goal-setting, leadership, self-esteem, conflict resolution, and fitness skills" (DDRTF brief, July 1994). DEFY is actually a two phase program. It combines an intensive five day residential summer camp (phase one) with a follow-up school mentoring program (phase two). Besides the one-on-one mentoring, the school program includes tutoring and special events. It is intended to reinforce the

---

<sup>47</sup>Major portions of this section were obtained during an interview with Captain Ken White (USMC), SECNAV Drug Demand Reduction Task Force (DDTRF) Washington, DC, by the author on 08 August 1994.

<sup>48</sup>Examples of other community outreach programs include: The Young Marines, The Naval Sea Cadet Corps, Campaign Drug Free/Navy Kids, and the Seaborne Conservation Corps (SCC).

role-modeling initiated in phase one. In FY-94, DEFY expanded from the original two sites (FY-93) to 28 sites (for a total of 35 programs). It reached communities in 18 states, enrolling over 1,500 young people (CHINFO MSG, 1994). The cost of DEFY will exceed one million dollars in FY-94 and is expected to increase to about \$1.6 million in FY-95 (DCNO {N-515} CD spreadsheet, 1994).

Chapter III detailed the shift in the federal budget priorities toward prevention and treatment programs and showed a 23 percent drop (from FY-93 to FY-95) in total DoD counterdrug funding (see Table 3-1). The Administration's FY-95 budget for DoD shows a \$13.2 million request for community outreach programs.<sup>49</sup> Over six million dollars of this request was for community programs targeting inner-city youth (all Services). While DoD and the military departments absorbed a \$10 million cut in their overall prevention budgets, new community awareness prevention programs (e.g., DEFY) were being added for DoD sponsorship.

Few will argue with the strategy of targeting youth in drug prevention models. The most important predictor of risk for drug abuse is the age an abuser initially uses drugs. Research has shown that when the use was initiated before the age of 15, there is a major risk of serious drug abuse later in life (Kandel, 1978, 1982; Kandel et al., 1986). Therefore, the most effective long-term prevention strategies point to programs like DEFY (intervention before abuse has started).

However, the question becomes: "Is the Navy efficiently using its scarce drug abuse prevention dollars to combat internal drug abuse problems or are the funds being siphoned-off into programs unrelated to DoD's overall mission?" Though not directly associated, it is ironic that the Navy's PREVENT

---

<sup>49</sup>The total Federal Budget request for Community Awareness and education programs (including workplace programs) totals over \$2 Billion for FY-95, a 32 percent increase over FY-93 (NDCS, 1994).

program received a one million dollar cut in FY-94 while the Navy increased its spending on the DEFY program by roughly the same amount.

The shift in resources from "pure" DoD mission related functions to programs considered non-defense is a political problem which has recently received more attention. The Congressional Research Service reported the following:

...as the defense budget is going down, the share that is non-defense is {going} up...about \$3.1 billion of the 1990 military budget went for non-defense programs. By 1994, the diverted funds had increased to \$12.7 billion. (Congressional Research Service, 1994)

Some of the "non-defense" related programs the Congressional Research Service highlights include:

- Breast cancer research
- The Summer and Special Olympics
- Foreign aid
- Civilian youth programs

Senator Daniel R. Coats (R-Indiana) was questioned about the apparent flow of funds from defense to non-defense programs, and specifically about DoD sponsored inner-city drug abuse programs (like DEFY).<sup>50</sup> The Senator responded that the Senate Armed Services Committee was very concerned about this issue, but that they also recognized the unique opportunities/abilities that military personnel possess. Rather than cut-off good programs, Senator Coats suggested that those federal agencies benefiting from

---

<sup>50</sup> Senator Coats addressed the student body at The Naval Postgraduate School, Monterey, CA on 28 October 1994. He serves on the Senate Armed Services Committee and is also an influential member of The Subcommittee on Children, Family, Drugs and Alcoholism.

defense personnel (and other DoD assets) should be required to fund the special programs (i.e., reimburse DoD for the cost of the programs).

The requested DoD drug prevention budget totals only \$79.9 million in FY-95 (which includes funding for drug testing), and represents a decrease of \$10 million (FY-93 to FY-95); conversely, the Department of Education's (DoE) drug prevention budget increased by over \$173.4 million (NDCS, 1994).<sup>51</sup> One questions why non-defense programs like DEFY are not funded from DoE's resources?

## **B. PERSONNEL EFFICIENCY AND EFFECTIVENESS IN DRUG PREVENTION**

Personnel efficiency and effectiveness are discussed together in this section for reasons of continuity. Personnel efficiency relates to how well one is maximizing efficiency in using the "scarce resource" of human labor. When discussing this in relation to drug abuse prevention programs, one must consider who to assign the NADAP program responsibilities at the command level (i.e., the DAPA). The goal is to increase the efficiency of the command's labor while increasing the effectiveness of the program.

### **1. The Command DAPA**

The duties, responsibilities, and requirements of the command DAPA are outlined in Chapter III. OPNAVINST 5350.4B recommends that the DAPA be a "top-performing volunteer" who is a mature individual (E-6 or above) with credibility at every level within the command. The DAPA job is a collateral duty assignment in units having less than 1,000 people. Therefore, in the majority

---

<sup>51</sup>The DOE's FY-95 total prevention request totals over \$782 million. The \$173.4 million net increase is over the FY-94 appropriation. A break-out of the increase shows: (1) \$110.5 million increase for Safe and Drug-Free Schools and Communities State Grants; (2) an \$80 million increase for Safe Schools; and (3) a \$0.5 million increase for program administration (NDCS, 1994, p. 30).

of the Navy's command's, the DAPA's duties must be completed after the "normal" job requirements are fulfilled. There are several inefficiencies in managing the DAPA program which reduces the over-all effectiveness of drug prevention at the command level. These include:

- Billet assignments and the DAPA
- Volunteers for DAPA
- Abundance of Special Programs and Training Requirements

***a. Billet Assignments and The DAPA***

When BUPERS assigns personnel to commands, the DAPA qualification is not considered. Therefore, a command often must "grow its own" DAPA by sending the individual to school.<sup>52</sup> Since the DAPA course teaches just the very basics in substance abuse prevention, practical experience is important for building a successful program. When an individual rotates from the command, the detailee does not consider the previous DAPA assignment (even if it was a primary duty). As a result, some command's may end up without any personnel trained or experienced in DAPA responsibilities; another's may have several individuals with extensive DAPA experience. Efficiency is lost since the Navy does not optimize its labor force by logically assigning its personnel based on DAPA expertise.

***b. Volunteers for DAPA***

The ambition of the NADAP is for the command's best personnel to strive to be the DAPA. Unfortunately, the reality is often quite different. This study found (through various interviews and the author's own experience)

---

<sup>52</sup>The DAPA course is a five day training program which teaches the basics on running a command level drug and alcohol program (such as filling out reports and setting-up aftercare appointments).

that the DAPA is often relegated to the senior enlisted "forced-volunteer" who probably will not make the next grade level, or a junior officer (usually with less than four years of active duty). The "top performing," highly motivated, self-starter that OPNAVINST 5350.4B envisions volunteering for the DAPA assignment is also a dynamic leading petty officer, shop supervisor, or promising division chief who is striving for "operational" type collateral duties vice "soft" programs like DAPA.<sup>53</sup> Simply put, the DAPA is usually not a high profile collateral duty eagerly sought after by command personnel. This results in a drug prevention program which may suffer in effectiveness (less motivated individuals running the program).

***c. Abundance of Special Programs and Training Requirements***

A chief complaint in the fleet today are the numerous mandated "extra" programs and training requirements. From aggressive General Military Training (GMT) guidelines to "HIV/AIDS" awareness, sexual harassment and "Lower Back Injury" prevention, the command inspection guidelines continue to expand on programs and training which units are required to complete. With the increasing number of programs and training, the tendency is for commands to just "check the block." In other words, go through the motions of meeting the minimum training requirements without consideration for effectiveness. The drug and alcohol programs within the command can become viewed as simply one more requirement to complete. This tends to severely decrease effectiveness.

The efficiency problem arises from the segmented way many of these requirements are fulfilled. The individual is once again fragmented into many different behavioral type high-risk components. Rather than grouping the

---

<sup>53</sup>There is at least one situation where the command DAPA was a "recovering alcoholic" who had not quite recovered. The commanding officer did not trust the individual to work on the squadron aircraft, so he was assigned several "special" type programs, including DAPA.

high-risk behaviors together (like alcohol abuse, tobacco cessation, HIV/AIDS, sexual assault, and suicide), these behaviors are split apart with different command personnel being responsible for each piece. Certainly some economies of scale exist in having one highly trained individual specialize in "wellness" or "special training" type programs to achieve some of the "overlap phenomenon" discussed earlier in this thesis.

## **2. Training and Special Program Professional**

During an interview with a former Navy Director of Budget and Reports (NCB/N-82) the question was posed whether the Navy had ever considered creating a "Training Specialist" or "Special Program Professional" billet at the command level to effectively and efficiently carry out the many additional collateral training responsibilities a command must fulfill (specifically referring to the drug and alcohol programs).<sup>54</sup> The retired rear admiral stated that the idea had been considered during the ZBT&ER deliberations. He personally supported the proposal, but no movement had been made on the issue (Interview with Milligan, 1994).

The Secretary of the Navy recently approved creating the Special Duty Officer (Fleet Support) Community. The CNO has directed shifting the General Unrestricted Line (GEN URL) community to fulfill the Fleet Support mission, changing the GEN URL from an 110X designation to a staff (restricted line community) designation of 170X (CNO MSG, 1994). One of the career paths being built into the fleet support competitive categories is in Manpower, Personnel, and Training (MPT). Serious consideration should be given to creating a "Special Program Training" billet within each command and assigning the MPT specialists (170X) these "special program" duties (including the DAPA

---

<sup>54</sup>The Director of Budget and Reports (NCB) prepares and administers the Department of Navy Budget for SECNAV. NCB is "double-hatted," working also for the CNO as The Director of the Fiscal Management Division (N-82).



responsibilities). Efficiencies would be created as detailers could match individual's experience and expertise to specific billets. Additionally, the Training Specialists could efficiently group the various command programs together, creating an increasingly effective and comprehensive approach to substance abuse and the many other behavioral oriented programs existing in the Navy today.



## **VI. CONCLUSIONS AND RECOMMENDATIONS**

### **A. CONCLUSIONS**

This thesis has considered the primary research question: What is the most effective and efficient method to prevent drug abuse in the Navy? Three subsidiary questions were addressed to answer this question:

- Is drug testing an effective method for preventing drug abuse?
- What is the best model for preventing drug abuse?
- Does the Navy efficiently utilize its resources in fighting drug abuse?

#### **1. Drug Testing as an Effective Method for Preventing Drug Abuse**

Without question, urinalysis has proven to be an effective drug abuse prevention method in the Navy. However, its level of effectiveness depends on at least four prerequisites:

- Randomness of the drug test (using the constant model)
- A clear statement of consequences
- Command level implementation
- Reliability/believability of the drug test

While drug testing has shown to be effective, the importance of other prevention and intervention programs cannot be discounted. This is particularly important when considering the risk of substitute substances and other high-risk behaviors.

## **2. The Best Model for Preventing Drug Abuse**

The cognitive/lifestyle model of drug abuse prevention appears to be the best model for prevention and intervention. The multi-modality approach that researchers recommend addresses behavior change, creating an overlap phenomena of prevention. The Navy's PREVENT program uses this cognitive/lifestyle model in its Level I intervention and prevention course.

The Air Force also has shown effective prevention efforts in preventing drug abuse. Their success appears to be linked to the following elements:

- Historically tighter drug abuse policy
- Quality of recruit/psychological profile
- Proactive law enforcement
- Quality of life

## **3. The Efficient Utilization of Resources**

The utilization of resources was considered from two different levels and perspectives:

- Program funding and management responsibilities
- Efficiency and effectiveness at the command level

### ***a. The Flow of Program Funds and Management Responsibilities***

Of all the drug prevention programs, the Navy gives drug testing the "highest priority." The PREVENT program's efficiency and effectiveness

suffers primarily due to the inefficient way the Navy services the PREVENT contract. These inefficiencies include:

- Multiple resource providers
- A flexible budget which cannot compete with the higher priority funding for drug testing
- A separation between drug prevention funding and other "wellness" programs (i.e., fragmented budgets addressing holistic type behavioral problems)

Additionally, the resource sponsorship, major claimancy, and program manager functions appear to be spread between too many Navy departments. This creates redundancy, "lack of ownership," and other efficiency related problems.

***b. Efficiency and Effectiveness at the Command Level***

Both the efficiency and effectiveness of the command level drug prevention program (managed by the DAPA) appears questionable due to the following factors:

- Personnel with prior DAPA training or experience are not tracked at the BUPERS level. Therefore, assignment to specific command level billets is not possible.
- "Volunteers" for DAPA may not be "top performing" individuals. As a collateral duty, the DAPA responsibility might not be considered a premiere, front running assignment.
- The abundance of special programs and training requirements mandated to the commands can actually reduce efficiency and effectiveness.

## **B. RECOMMENDATIONS**

Based on the analysis conducted in this thesis and the conclusions reached in the prior section, four primary recommendations are offered for consideration:

- Maintain a sound and proactive PREVENT program
- Consolidate wellness type program responsibilities
- Continue the current drug testing program with a focus on ways to increase command level implementation
- Provide strong, top-level support for the drug abuse prevention budget

### **1. Maintain a Sound and Proactive Prevent Program<sup>55</sup>**

PREVENT is an excellent model of drug abuse prevention. Unfortunately, even as the demand for PREVENT exceeds the supply, resources continue to decline. The PREVENT program is in jeopardy of being significantly altered due primarily to financial constraints.

The current PREVENT contract expires at the end of FY-95. The Navy has an opportunity to review the contract and request changes to strengthen and increase the PREVENT program's effectiveness and efficiency.

### **2. Consolidation of Wellness Type Program Responsibilities**

All wellness and health promotion type programs (including drug and alcohol programs) should be consolidate under the same chain-of-command for resource sponsorship, major claimancy, and program management functions.

---

<sup>55</sup>This is the second thesis completed in the past twelve months which has independently come to the same primary recommendation (to maintain or expand the PREVENT program). See Lewis, S.W., *A Cost Analysis of a Navy Drug Abuse Education Program*, Naval Postgraduate School thesis, Monterey, CA, December 1993.

This recommendation concurs with the ZBT&ER recommendation, suggesting the programs be grouped under the sole resource sponsorship of N-7 (Director of Naval Training), with CNET acting as the major claimant and program manager.

### **3. Continue Current Drug Testing: Focus on Command Implementation**

The Navy should continue its proven drug testing program and focus on command level drug prevention implementation in the following areas:

- Consider creating a Training Specialists career path at the command level who would assume the DAPA duties and responsibilities as one of their primary tasks. The newly created Special Duty Officer (Fleet Support) Community (170X) appears to be ideally suited for this role.
- Continue to support efforts increasing believability/reliability of the drug testing program.
- At the Recruit Training Command, the Navy should continue its use of the N-AFMET psychological screening process to attrite undesirable personnel (especially those with substance abuse problems).

### **4. Strongly Defend the Navy's Drug Abuse Prevention Budget**

As DoD's and the Navy's counterdrug dollars decrease, a strong defense should be made to maintain the Navy's internal drug prevention programs (both drug testing and drug prevention/education). Specifically, the Department of Defense should argue against funding non-defense related programs from DoD budgets.

## **C. AREAS FOR FURTHER RESEARCH**

### **1. Target Drug Testing Based on Age**

The overwhelming majority of drug abusers in the Navy are under 26 years of age (over 80 percent). Creating a random urinalysis test model which biased the probability of being tested toward the younger generation could increase detection/deterrence and save resources.

### **2. Expanding the PREVENT Program**

The influence of the military on young enlistees as they transition to adulthood is significant. Research points to this transition period (between the ages of 18-21) as one of "great plasticity," with significant impacts on both the personality and the social perspective of the young adult (Lieblich, 1989).

PREVENT, as a "cognitive/lifestyle" behavioral change model, provides exceptional resources to the young enlisted recruit and can have a positive affect on this "transition to adulthood." Therefore, further study should consider incorporating PREVENT into a core requirement for advancement to third class petty officer, ensuring all sailors have the benefit of this excellent program. Additionally, further study should consider the applicability of including a PREVENT module for basic training or "A" school graduates.

### **3. Developing Effective Strategies for the DPAS/DIPM Program**

The Drug Policy Analysis System (DPAS) and the Drug Information Presentation Model (DIPM) programs offer a valuable tool in developing effective strategies for implementing a more efficient drug testing program. Further research is needed to evaluate the best way to utilize these new powerful information systems.



## LIST OF REFERENCES

- Adams, D.M., & Overholser, J.C., *Suicidal Behavior and History of Substance Abuse*, research paper available through Internet: America On Line Substance Abuse Library (23 August 1994), study conducted through Department of Psychology, Case Western Reserve University, Cleveland OH, 1989.
- Ahart, J. & Stiles, G., *The Military's Entry into Air Interdiction of Drug Trafficking from South America*, p. 25, published by RAND, (RAND Note N-3275-A/AF), Santa Monica, CA, 1991.
- Air Force Regulation (AFR 30-2), *Personnel: Social Actions Programs*, Washington HQ USAF, 18 April 1986.
- Alcohol and Drug Abuse Managers/Supervisors (ADAMS) Facilitator Manual*, published by the Bureau of Naval Personnel (PERS-63), Washington, D.C. (Rev. 12/93), December 1993.
- Alcohol and Drug Abuse Managers/Supervisors (ADAMS) Resource Guide*, published by the Bureau of Naval Personnel (PERS-63), Washington, D.C. (Rev. 7/93), July 1993.
- American Management Association (AMA), *Survey on Workplace Drug Testing and Drug Abuse Policies (1994)*, published by AMA Research Reports, New York, NY, 1994.
- Backer, T.E., *Strategic Planning for Workplace Drug Abuse Programs*. Rockville, MD, NIDA, 1987, as reported in the National Institute on Drug Abuse Research (Monograph Series), *Drugs in the Workplace: Research and Evaluation Data*, published by the U.S. Department of Health and Human Services, Vol 2, Monograph #100, p. 25, 1990.
- Becker, H.G. and Greer, B., *Participant Observation and Interviewing: A Comparison in Qualitative Methodology*, p. 133, edited by W.J. Filstead. Chicago: Markham, 1970.
- Botvin, G.j., and Tortu, S., *Preventing substance abuse through life skills training*, 1988. As reported in *Drug Abuse and Drug Abuse Research III*, 1991.
- Boyle and others, *Markov Chains for Random Urinalysis I: Age-Test Model (Series)*, Naval Personnel Research and Development Center, San Diego, CA, March 1993

Bray, R.M., and others, *1992 Worldwide Survey of Substance Abuse and Health Behaviors in Military Personnel {Highlights}*. Report prepared for the Assistant Secretary of Defense (Health Affairs), U.S. Department of Defense (Contract No. MDA 903-91-C-0220). Research Triangle Park, NC.: Research Triangle Institute. (RTI/5151/06-17FR), 10-5, December 1992.

Bray, R.M., and others, *Drug and alcohol Use in the Military Workplace: Findings from the 1988 Worldwide Survey*, published in the NIDA Research Monograph Series (100) entitled, *Drugs in the Workplace: Research and Evaluation Data*, Volume II, edited by Gust, S.W. and others, 1990.

Bray, R.M., and others, *Prevalence, Trends, and Correlates of Alcohol Use, Nonmedical Drug Use, and Tobacco Use Among U.S. Military Personnel*, *Military Medicine*, Vol 154 No. 1, pp. 1-11, January 1989.

Buckley, J.W., and others, *Research Methodology & Business Decisions*. National Association of Accountants and The Society of Industrial Accountants of Canada, 1976.

CHINFO MSG (DTG: 132300Z JUL 94), *"Navy Launches Nationwide Drug Prevention Partnerships,"* Washington, D.C., 13 July 1994.

CINCLANTFLT Message (DTG: 011830Z AUG 94), *"Drug Urinalysis Testing Program,"* Norfolk, VA, 11 August 1994.

*Comprehensive Review DoD Counterdrug Program*, prepared by the Office of the Coordinator for Drug Enforcement Policy and Support, Washington, D.C., September 1993.

CNO Message (DTG: 122032Z FEB 92), *"Mandatory Separation Processing of E-1 and Above Personnel After One Drug Abuse Offense,"* Washington, D.C., 12 February 1992.

CNO Message (DTG: 060057Z OCT 94), *"Transition of the GEN URL Community to the Restricted Line Fleet Support Community."* Washington, D.C., 06 October 1994.

*Congressional Hearing on Federal Drug Interdiction Efforts*, Hearing before the Select Committee on Narcotics Abuse and Control House of Representatives (102nd Congress, 1st session), Washington, D.C., p. 12, 20 June 1991.

Congressional Research Service, as reported in *The Navy Times*, *"DoD's dollars aren't always for defense,"* issue #50, 19 September 1994.

Counterdrug (CD) Spreadsheet, {Unpublished}, Obtained from DCNO (Plans, Policy, and Operations) Counterdrug Branch (N-515) during an interview with Captain Murray Weisberg, USN, and the author, 09 August 1994.

Contreras, D.A., and Munger, S.R., *A Comparison of Civilian and U.S. Navy Drug Prevention Programs*, {Unpublished}, Naval Postgraduate School, Monterey, CA, 05 August 1994.

Department of Defense Selected Manpower Statistics (FY-93), published by Washington Headquarters Services, Directorate for Information, Operations and Reports (DIOR/MO1-93), 1993.

Department of Defense, *1992 Survey of Officers and Enlisted Personnel and their Spouses*, as reported in the Navy Times, 29 August 1994.

Department of Defense Instruction 1010.5, as quoted in the *Alcohol and Drug Abuse Managers/Supervisors (ADAMS) Facilitator Manual*, published by the Bureau of Naval Personnel (PERS-63), Washington, D.C. (Rev. 12/93), December 1993.

Department of Labor, *What Works: Workplaces Without Alcohol and Other Drugs*, published October 1991 (reprinted 1994).

Doster, T.R., and Ross, H.A., *An Analysis of the Effectiveness of the Air Force Drug Testing Program and Four Potential Modifications*, {Thesis}, (AFIT/GSM/LAR/93S-5), Air Force Institute of Technology, Wright-Patterson Air Force Base, OH, 1993.

*Drug Abuse and Drug Abuse Research III*, The Third Triennial Report to Congress from The Secretary, Department of Health and Human Services, published by the Department of Health and Human Services, Alcohol, Drug Abuse, and Mental Health Administration, 1991.

Drug Demand Reduction Task Force (DDTRF) briefing slides, received from the DDTRF office (Captain Ken White, USMC), 08 August 1994. Date of slides, 07 July 1994.

Drug Demand Reduction Task Force (DDTRF) briefing slides, received from the DDTRF office (Captain Ken White, USMC), 08 August 1994. Date of slides, 16 August 1994.

Eitelberg, M.J., *Manpower for Military Occupations*, published by the Office of the Assistant Secretary of Defense (Force Management and Personnel), April 1988.

Everingham, S.S., and Rydell, P.C., *Modeling the Demand for Cocaine*, RAND Corp., (Drug Policy Research Center), Santa Monica, CA, prepared for the Office of National Drug Control Policy, 1994.

Global Reliance, "America's War on Drugs," and "*Tacoma Takedown*," published by HQ AFOSI, Bolling AFB, Washington, D.C., Vol 17, No. 2, pp. 14-15, March/April 1991.

Global Reliance, "Airman busted for Cocaine Possession," published by HQ AFOSI, Bolling AFB, Washington, D.C., Vol 16, No. 5, p. 11, September/October, 1990.

Guba, E.G. and Lincoln, Y.S., *Effective Evaluation: Improving the Usefulness of Evaluation Results Through Responsive and Naturalistic Approaches*, p. 113, San Francisco: Jossey-Bass, 1981.

Hawkins, J.D. and others, *Childhood predictors and the prevention of adolescent substance abuse*, 1985. *Delinquents and drugs: What the evidence suggests about prevention and treatment programming*, 1987. As reported in *Drug Abuse and Drug Abuse Research III*, 1991.

Hayward, T. B., (Chief of Naval Operations, 1978-1982). *CNO Speaks on Drug Abuse in the Navy* {Video}, Navy Spotlight, December 1981.

Hearing Before the House of Representatives Select Committee on Narcotics Abuse and Control. *Federal Drug Interdiction Efforts*. One Hundred Second Congress, First Session, 20 June 1991.

Henderson, D.R., *The Fortune Encyclopedia of Economics*, ed. by Henderson, Warner Books, Inc., New York, NY, August 1993.

Heyne, P., "Efficiency," published in, *The Fortune Encyclopedia of Economics*, ed. by Henderson, D.R., Warner Books, Inc., New York, NY, p. 9, August 1993.

Hildebrandt, J., *Logit Estimation of DoD Drug Use and Factors Affecting Drug Use*. Naval Postgraduate School, Monterey, CA, September 1994.

House of Representatives Conference Report (to accompany H.R. 5006), *National Defense Authorization Act For Fiscal Year 1993*, 102nd Congress, 2d Session, Report 102-966, Washington, D.C., 01 October 1992.

Hunt, D.V., *Quality Management for Government: A Guide to Federal, State, and Local Implementation*, p. 321, Technology Research Corporation, Quality Press, Milwaukee, WI, 1993.

Idar, I. and Scaramozzino, J.A., "Attrition Management Tool: Navy Recruit Psychological Screening," Proceedings: 34th Annual conference of the Military Testing Association, Vol. II, 1992.

Interview (by phone) between Anderson, Bray, and French, Research Triangle Institute, Research Triangle Park, NC and Ms. Miki Terasawa, Naval Postgraduate School, July 1994.

Interview between J. Borack, J.P. Boyle, J.W. Mosteller, M. Chipman, Naval Personnel Research and Development Center (NPRDC), San Diego, CA and the author, 12 July 1994.

Interview (by phone) between R.M. Bray, Research Triangle Institute, Research Triangle Park, NC and Ms. Jennifer Hildebrandt, Naval Postgraduate School, June 1994.

Interview (by phone) between Major Rich Cervetti, USAF, Air Force Enlisted Separations & Retirements Branch (DPXER), and the author, 24 October 1994.

Interview between MSgt Anita. Darby/Lt. Col. Herdman, USAF, USAF Drug Demand Reduction Office (AF/DPCH), Washington, D.C., and the author, 08 August 1994.

Interview between LCDR George Davis, Branch Head, Detection & Deterrence (Pers-63), Washington D.C., and the author, 08 August 1994.

Interview (by phone) between B.R. Hartmann, Ph.D., Director of PREVENT Program, University of Arizona NADSAP/PREVENT office, Tucson AZ, and the author, 21 November 1994.

Interview between Captain Richard L. Hilderbrand, USN, DoD Drug Enforcement Policy and Support, USDP/DEP&S (DR), Washington, D.C., and the author, 09 August 1994.

Interview (by phone) between Captain Hughes, USN, Bureau of Medical and Surgery, (BUMED), Washington, D.C., and the author, 29 August 1994.

Interview (by phone) between Lt. Col. J.J. Kuhlman, USAF, AFIP (Drug Detection and Quality Control Lab) Washington, D.C., and the author, 30 August 1994.

Interview between Mr. John Mahan/Ms. Eleanor Cook, Navy Drug and Alcohol Program (Pers-63) Training Branch, Washington D.C., and the author, 08 August 1994.

Interview (by phone) between LCDR N.M. Massengill, USN, Chief of Naval Education and Training (CNET, N-112) and the author, 14 September 1994.

Interview between R.D. Milligan, RADM, (USN-Retired), Naval Postgraduate School, Monterey, CA, and the author, 08 September 1994.

Interview (by phone) between CDR Joe Mulloy, Operations/Fiscal Management Division (NCB-1), Washington, D.C., and the author, 09 September 1994.

Interview between J.L. Weingartner, Special Agent USAF/OSI, Naval Postgraduate School, Monterey CA, and the author, 14 & 28 October 1994.

Interview between Captain M. Weisberg, USN, DCNO (Policy, Plans, & Operations) Counterdrug Branch (N-515), Washington D.C., and the author, 09 August 1994. Several additional follow-up phone conversations occurred with other CD branch personnel.

Interview between Captain Ken White, USMC, Secretary of The Navy, Drug Demand Reduction Task Force (DDTRF), Washington D.C., and the author, 08 August 1994.

Jones, R.M., and others, *An Investigation of Cognitive Style and Alcohol/Work-Related Problems among Naval Personnel*. Journal of Drug Education, Vol. 22, No. 3, 1992.

Kandel, D.B., ed. *Longitudinal Research on Drug Use*. pp.3-38, Washington, D.C., Hemisphere, 1978. As reported in *Drug Abuse and Drug Abuse Research III*, p. 35, 1991.

Kandel, D.B., *Epidemiological and psychosocial perspectives on adolescent drug use*. Journal of Am Acad Clin Psychiatry 21(4):328-347, 1982. As reported in *Drug Abuse and Drug Abuse Research III*, p. 35, 1991.

Kandel, D.B., and others, *Risk factors from delinquency and illicit drug use from adolescence to young adulthood*. Journal of Drug Issues 60(1):67-90, 1986, As reported in *Drug Abuse and Drug Abuse Research III*, p. 35, 1991.

Klitzner, W., Report to Congress on the Nature and Effectiveness of Federal, State, and Local Drug Prevention/Education Programs, Part II: An Assessment of the Research on School-Based Prevention Programs, 1987. As reported in *Drug Abuse and Drug Abuse Research III*, 1991.

Kuhlman, J.J., and Smith, M.S., A Twenty Year History of The Department of Defense Urine Drug Testing Blind Quality Control Program, {Briefing Papers}, prepared by the Department of Defense Drug Detection Quality Assurance Laboratory, Armed Forces Institute of Pathology, Washington, D.C., 1993.

Lewis, S.W., "A cost Analysis of a Navy Drug Abuse Education Program." Master's Thesis, Naval Postgraduate School, Monterey, CA, December 1993.

Lieblich, A., *Transition to Adulthood During Military Service (The Israeli Case)*, State University of New York Press, Albany, NY, 1989.

Marcia, J.E., *Some Directions for the Investigation of Ego Development in Early Adolescence*, Journal of Early Adolescence, 3:3, pp.215-223, 1983.

Mauss, A.L., and others, *The problematic prospects for prevention in the classroom: Should alcohol education programs be expected to reduce drinking by youth?*, 1988. As reported in *Drug Abuse and Drug Abuse Research III*, 1991.

Moskowitz, J.M., The primary prevention of alcohol problems: A critical review of the research literature, 1989. As reported in *Drug Abuse and Drug Abuse Research III*, 1991.

*National Drug Control Strategy (NDCS): Budget Summary*. Office of National Drug Control Policy, Executive Office of the President, The White House, Washington, D.C., February 1994.

*National Drug Control Strategy (NDCS): Reclaiming Our Communities From Drugs and Violence*. Office of National Drug Control Policy, Executive Office of the President, The White House, Washington, D.C., February 1994.

*National Drug Control Strategy (NDCS): A Nation Responds to Drug Use*. Office of National Drug Control Policy, Executive Office of the President, The White House, Washington, D.C., January 1992.

*National Household Survey On Drug Abuse (NHSDA): Main Findings (1991)*, published by the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, Rockville, MD, May 1993.

*National Household Survey On Drug Abuse (NHSDA): Population Estimates (1992)*, published by the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, Rockville, MD, October 1993.

*National Household Survey On Drug Abuse (NHSDA): Preliminary Estimates (1993)*, Advance Report Number 7, published by the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, Rockville, MD, July 1994.

National Institute on Drug Abuse Research (Monograph Series), *Drugs in the Workplace: Research and Evaluation Data*, published by the U.S. Department of Health and Human Services, Vol 2, Monograph #100, Rockville, MD, 1990.

Navy Audit Service, Capital Region, *Alcohol and Drug Abuse Programs in the Navy and Marine Corps*, Audit Report T30262, p. 4, 02 December 1982.

OPNAVINST 5350.4B, "Alcohol and Drug Abuse Prevention and Control," Office of the Chief of Naval Operations, 13 September 1990.

Patton, M.Q., *Qualitative Evaluation and Research Methods*, (2nd Ed.), pp. 10-13, Sage Publications, Newbury Park, CA, 1990.

Pers-63 Point Paper, "Navy Alcohol and Other Drug Abuse Training Courses," Personal Readiness & Support Branch, Washington, D.C., September 1993.

Pers-63 Point Paper, "The U.S. Navy's War on Drugs." Personal Readiness & Support Branch, Washington, D.C., April 1994.

Peters, T., *The View From Mars; Quarter-Baked Ideas About you Business and your Careers*, Speech given at the Naval Postgraduate School, Monterey, CA {attended by the author} on 13 September 1994. Reported in *The Campus News*, Vol I, Issue 4, 10 November 1994.

Portney, P.R., *Benefit-Cost Analysis*, published in Henderson, D.R., *The Fortune Encyclopedia of Economics*, ed. by Henderson, Warner Books, Inc., New York, NY, pp. 3-6, August 1993.



PREVENT Profile, (no author given) published by the University of Arizona, PREVENT/NADSAP Office, Tucson, AZ, 1993.

PREVENT Fact Sheet, (no author given), published by the University of Arizona, PREVENT/NADSAP Office, Tucson, AZ, 1993.

PREVENT Information Guide, (no author given), published by the University of Arizona, PREVENT/NADSAP Office, Tucson, AZ, 1994.

PREVENT Course Workbook, Prepared under Navy contract N000123-90-D-5065 by the University of Arizona (Dr. Barbara Reed Hartmann, Ph.D), January 1994.

Rueter, P., *Can the Borders Be Sealed?* Published by the RAND Corporation, report N-2818-USDP, prepared for the Office of the Under Secretary of Defense for Policy, Santa Monica, CA, August 1988.

San Diego Drug Screening Laboratory, *Welcome Aboard Information Package*, includes the publication, "Answers to the Most Commonly Asked Questions on Drug Testing," {no date}, received by the author upon his request, September 1994.

Terasawa, M.L., *Estimation of Invisible Costs: Drug Abuse Costs to the Navy before Detection*. Naval Postgraduate School, Monterey, CA, 12 August 1994.

Tobler, N., *Meta-analysis of 143 adolescent drug problems: Quantitative outcome results of program participants compared to a control or comparison group*, J Drug Issues 16:537-567, 1986, as reported in *Drug Abuse and Drug Abuse Research III*, 1991.

*Urinalysis Coordinator Handbook*, published by the Department of the Navy, Bureau of Naval Personnel (Pers-63), Washington, D.C., 18 September 1992.

Zero-Based Training and Education Review (ZBT&ER), Final Report, published and forwarded to the Chief of Naval Operations by the Director of Naval Training (N-7), November 1993.

## INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145	2
2.	Library, Code 52 Naval Postgraduate School Monterey, California 93943-5101	2
3.	Dr. William Gates Naval Postgraduate School Systems Management Department (SM/Gt) 555 Dyer Road Monterey, California 93943-5104	1
4.	Commander Louis Kalmar, SC, USN Naval Postgraduate School Systems Management Department (SM/KI) 555 Dyer Road Monterey, California 93943-5104	1
5.	Captain James Scaramozzino, MSC, USN Defense Health Resources Study Center Naval Postgraduate School, Code 65 Monterey, California 93940	1
6.	Dr. David Blank Navy Drug and Alcohol Program Division Personnel Readiness & Community Support Department Bureau of Naval Personnel (Pers-63E) Arlington Navy Annex, G801 Washington, DC 20370-5630	1

7. Mr. John Mahan (Code 634) 1  
Navy Drug and Alcohol Program Division  
Personnel Readiness & Community Support Department  
Bureau of Naval Personnel (Pers-63E)  
Arlington Navy Annex, G801  
Washington, DC 20370-5630
8. The Naval Personnel Research and Development Center (NPRDC) 1  
Attn: Dr. Jules Borack  
53335 Ryne Road  
San Diego, California 92152-7250
9. Captain James L. Weingartner, USAF 1  
C/O AFOSI OL-CENT  
524 Shaw Drive  
Shaw AFB, South Carolina 29152-5029
10. Dr. B.R. Hartmann 1  
University of Arizona  
NADSAP/PREVENT Office  
2033 E. Speedway Blvd  
Tucson, Arizona 85719
11. LCDR D. Mark Peterson 2  
10742 Marlborough Road  
Fairfax, Virginia 22032